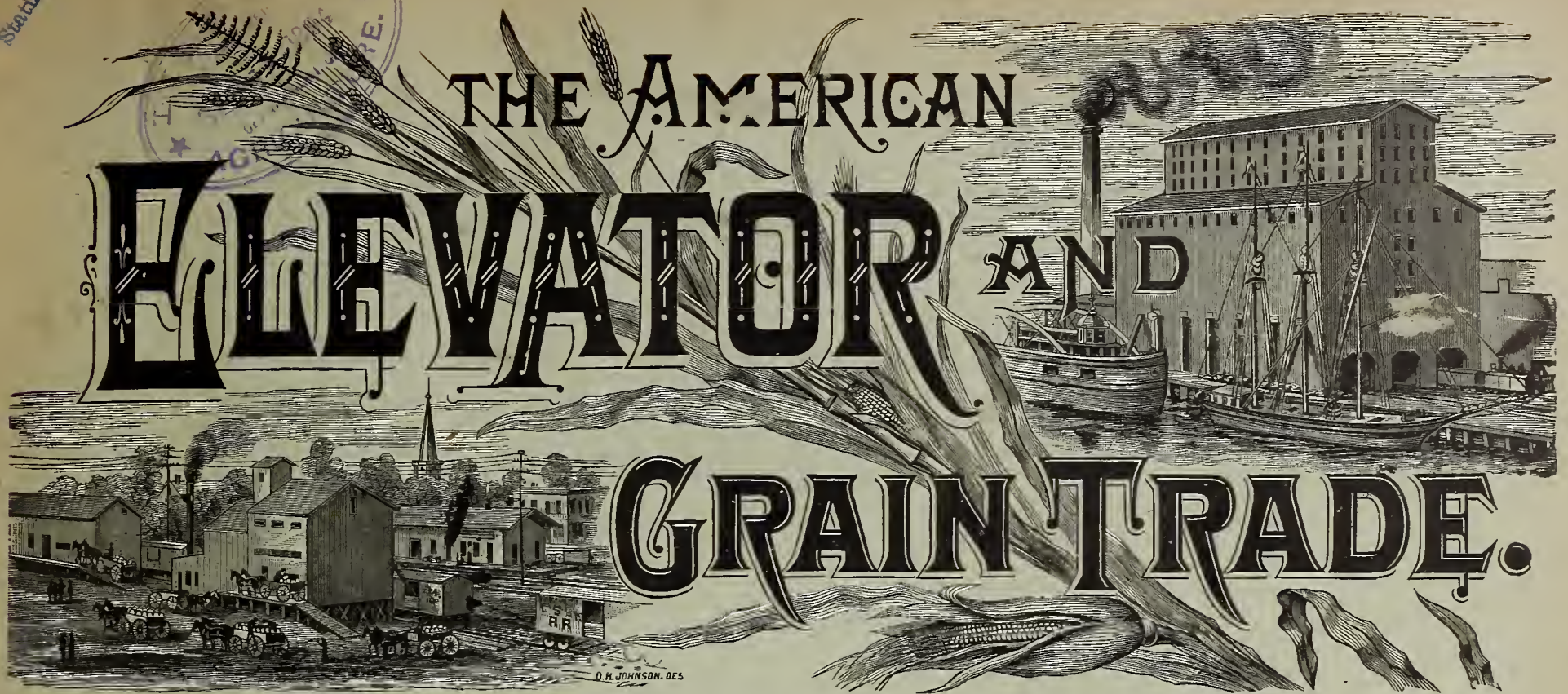


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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY MITCHELL BROS. COMPANY, (INCORPORATED.) Vol. XIII. CHICAGO, ILLINOIS, SEPTEMBER 15, 1894. No. 3. SUBSCRIPTION PRICE, ONE DOLLAR PER ANNUM.

Excelsior Grain-Cleaning Machinery

CONSISTING OF THE

EXCELSIOR Dustless Warehouse and Elevator Separator,
EXCELSIOR Oat Clipper, EXCELSIOR Separator and Grader,
EXCELSIOR "Combined Grain Machine."

ALSO

PEASE DUSTLESS SEPARATOR and WAREHOUSE FANNING MILLS,
POWER CAR PULLERS, GASOLINE ENGINES, STEAM ENGINES, HORSE POWERS,
POWER TRANSMISSION MACHINERY,
GENERAL MILL AND ELEVATOR SUPPLIES.

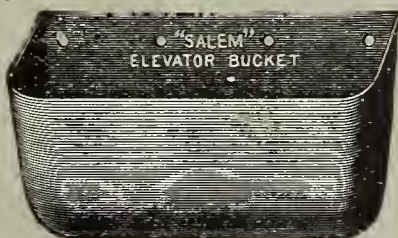
E. H. PEASE MFG. CO., RACINE, WISCONSIN.

ADDRESS

Headquarters for
SHAFTING, HANGERS, PULLEYS,
GEARS, SPROCKET WHEELS,
"Sweep" and "Tread" Horse Powers,
Elevator "Boots," "Heads," "Buckets,"
FEED GRINDERS,
Special Flax Mills; Single, Double and
Quadruple Flax Reels.
..... BELTING
"Platform," "Hopper" and "Dump"
Scales, Flexible Loading Spouts.
Corn Shellers, all kinds of FITTINGS,
SUPPLIES and MACHINERY for
Elevators and Mills.
Elevator Equipments a Specialty.

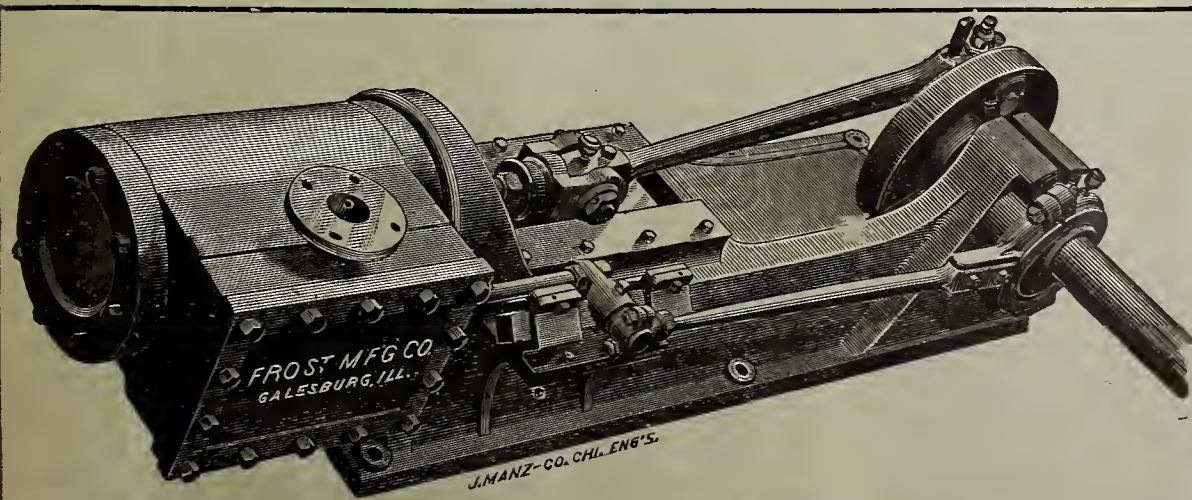
GALDWELL
CONVEYOR
HORSE POWERS
WIRE ROPE
BELT TIGHTENERS

MILL AND ELEVATOR MACHINERY
ELEVATOR BOOTS
ELEVATOR BUCKETS
ELEVATOR BOLTS
BELTING AND ROPE TRANSMISSION
SHEAVE WHEELS
SHAFTING, HANGERS
SPROCKET WHEELS



SEND FOR CATALOGUE

**THORNBURGH
MFG. CO.**
110 Jefferson Street
CHICAGO, ILL.



FOR PRICES AND DISCOUNTS
— ON —
Elevator Machinery
AND SUPPLIES
— OF —
EVERY DESCRIPTION,
EITHER STEAM OR HORSE-POWER,
ADDRESS **The FROST MFG. CO.,**
GALESBURG, ILL.

NOTICE.

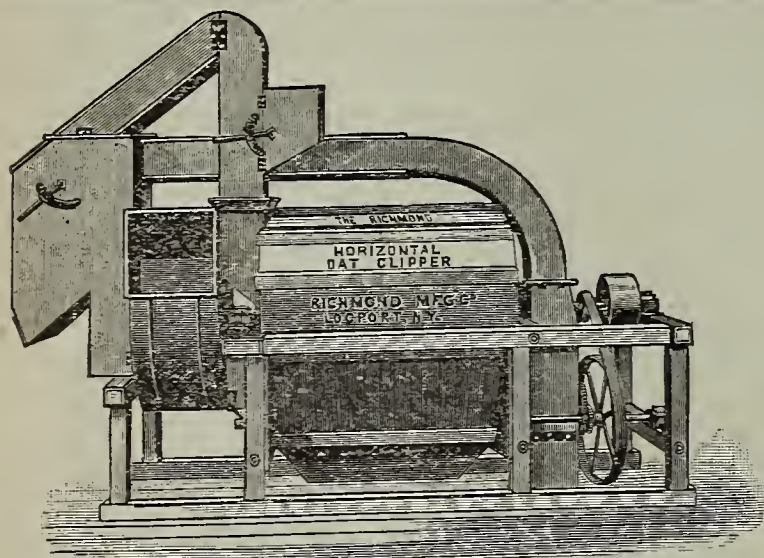
Important Decision Affecting Elevator Owners and Builders.

The Hon. Judge Grosscup of the Circuit Court of the United States for the Northern District of Illinois, on May 9, 1894, sustained the validity of the dust collector patents known as the "CYCLONE," and ordered a permanent writ of injunction against the defendants.

Infringing machines involved in these suits were built by the Vortex Dust Collector Co. of Milwaukee, and the Huyett & Smith M g. Co. of Detroit, Mich., who themselves assumed and conducted the defense, through their own attorneys. IF YOU HAVE USED, OR ARE USING INFRINGING MACHINES, YOU CAN SAVE MONEY BY PROCURING A LICENSE AT ONCE AND THUS AVOID LAW SUITS. We must and will call a halt on pirates and users of piratical machinery, and we warn the trade thus frankly and publicly against the manufacture, sale or use of infringing machines, and it will be our duty to prosecute such infringements of our rights to the fullest degree and in the promptest manner.

The Knickerbocker Co., - Jackson, Mich.

A Wonderful Machine.



The Richmond Horizontal Adjustable Oat Clipper with Revolving Case.

WEST JEFFERSON STEAM FLOURING MILLS,

WEST JEFFERSON, OHIO, April 11, 1894.

RICHMOND MFG. CO., Lockport, N. Y.

GENTLEMEN:—Inclosed find check, covering bill of March 10, in full. The No. 0 Horizontal Adjustable Scourer and Polisher with Revolving Scouring Case is a wonderful machine, and we are more than pleased with its work. We have cleaned all kinds of wheat and must say that it cleans beyond our expectations.

Yours very truly, JOHN RENNER.

The Richmond Grain Cleaning Machinery and Dusters.

RICHMOND MANUFACTURING CO.,

Write for Catalogue.

LOCKPORT, N. Y., U. S. A.

Link-Belt Machinery Co.,

ENGINEERS, FOUNDERS, MACHINISTS,
CHICAGO, ILL., U. S. A.



MANUFACTURE

Shafting. Shaft Bearings, Pulleys, Gearing,
Friction Clutches, Etc.
Manilla Rope Power Transmissions.
Standard Water Tube Safety Boilers.
Original Ewart Detachable Link Belting.
The Clark Power Grain Shovel.
Belt Conveyors and Trippers.
Savage & Love Patent Controllable Wagon
Dump.

NEBRASKA CITY, NEB., May 16, 1894.

CHICAGO AUTOMATIC SCALE CO., CHICAGO, ILL.:

Gentlemen:—Please ship to our address at Hamburg, Iowa, an Automatic Scale, same as we ordered of you some time ago. This Scale is doing good work and we want another for our mill at Hamburg. Send the invoice and notice of shipment to us here. Execute the order as promptly as possible. Yours truly,

THEO. BEYSCHLAG, Mgr.



Porter Iron Roofing and Corrugating Co.,

19 Race Street, CINCINNATI, OHIO.

Manufacturers of all kinds of IRON and STEEL ROOFING and SIDING.

The Pioneers of the Metal Roofing Business in the United States. We guarantee satisfaction. We ship promptly. Give us a trial order, and we will sell you more. When writing for our prices and Illustrated Catalogue, please mention the ELEVATOR AND GRAIN TRADE.

GRAIN ELEVATOR MACHINERY AND SUPPLIES

OUR SPECIALTY

Is to Furnish Every Description of

MACHINERY OR SUPPLIES

Required for the Equipment or Repairing of

GRAIN ELEVATORS

Such as:

**"SWEEP" and "TREAD" HORSE POWERS,
GAS ENGINES, OIL ENGINES, STEAM ENGINES.**

SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,
GEARS, SPROCKETS, SET COLLARS,
TAKE-UP BOXES, CRANE SPOUTS.
LEATHER, RUBBER, COTTON AND LINK BELTING.
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS.
ELEVATOR BOOTS, BUCKETS AND BOLTS.
"SPIRAL" AND "BELT" CONVEYORS.
"PLATFORM," "DUMP" AND "HOPPER" SCALES.
GRAIN SCOOPS, AND POWER GRAIN SHOVELS.

—ALL SIZES OF—

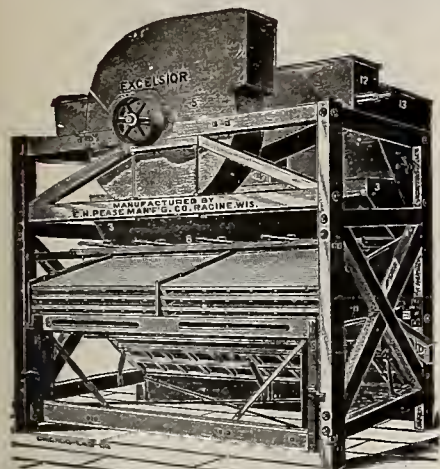
FARM AND WAREHOUSE FANNING MILLS.

GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,

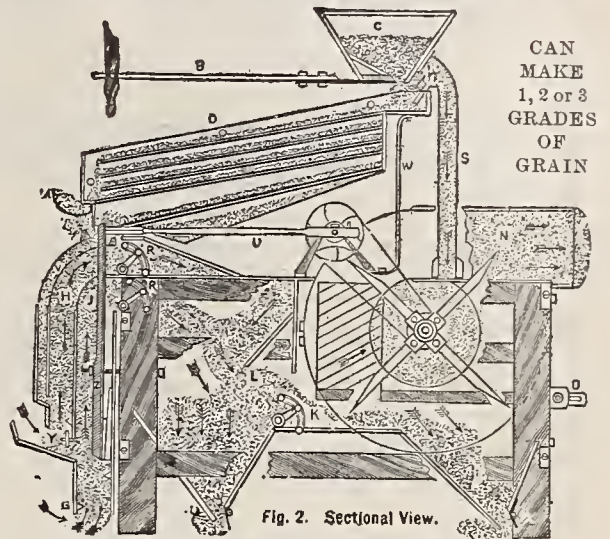
**Power Car Pullers, Oat Clippers, Dustless
Receiving Separators,**

POLISHERS, SEPARATORS, GRADERS,
FLAX REELS AND SPECIAL FLAX MILLS.

"OVERHEAD," "SWEEP" AND "TREAD" HORSE POWERS,
BAG-TRUCKS, WAREHOUSE TRUCKS, ETC.



EXCELSIOR DUSTLESS ELEVATOR SEPARATOR,
Cleans, Separates and Grades Perfectly.
HAS NO SUPERIOR IN THE WORLD.



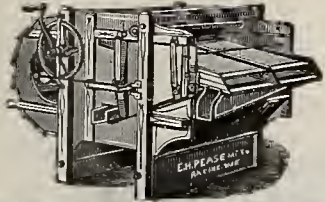
CAN
MAKE
1, 2 or 3
GRADES
OF
GRAIN

Fig. 2. Sectional View.

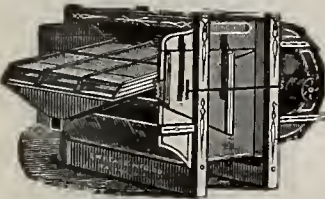
EXCELSIOR SEPARATOR AND GRADER.

The Finest Wheat or Barley Machine on Earth

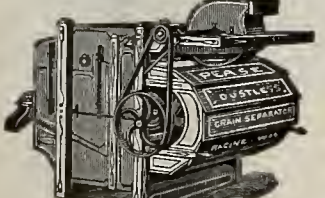
FAMOUS HAND OR POWER CLEANERS COUNTRY ELEVATORS.



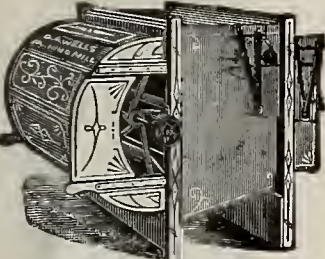
Pease Side-Shake Mill for Warehouses.



Pease End Shake Mill for Warehouses.

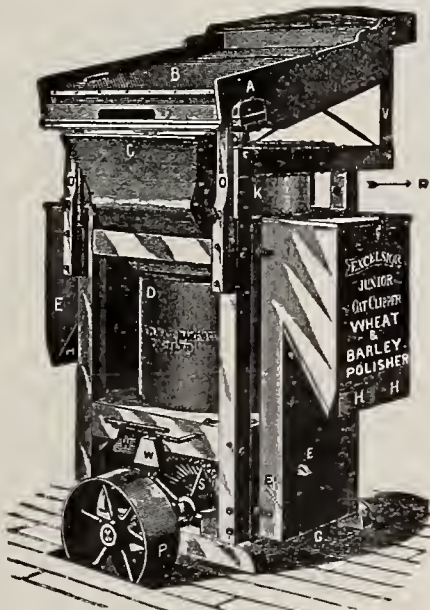


Pease Dustless Separator for Ware-
houses and Mills.



"Wells" Warehouse Mill.—Extra
Large Capacity.

IT WILL PAY
YOU
TO GET OUR
CATALOGUES
PRICES
AND PROOFS OF
SUPERIORITY
BEFORE BUYING
ELSEWHERE.



EXCELSIOR JUNIOR

Oat Clipper, and Wheat and Barley
Polisher, is the Simplest, Most Com-
pact, **LIGHTEST** Running, Quickest
Adjustable Machine of its kind
made

PEASE
SPECIAL
FLAX MILLS
ARE
SUPERIOR
TO ALL OTHERS.



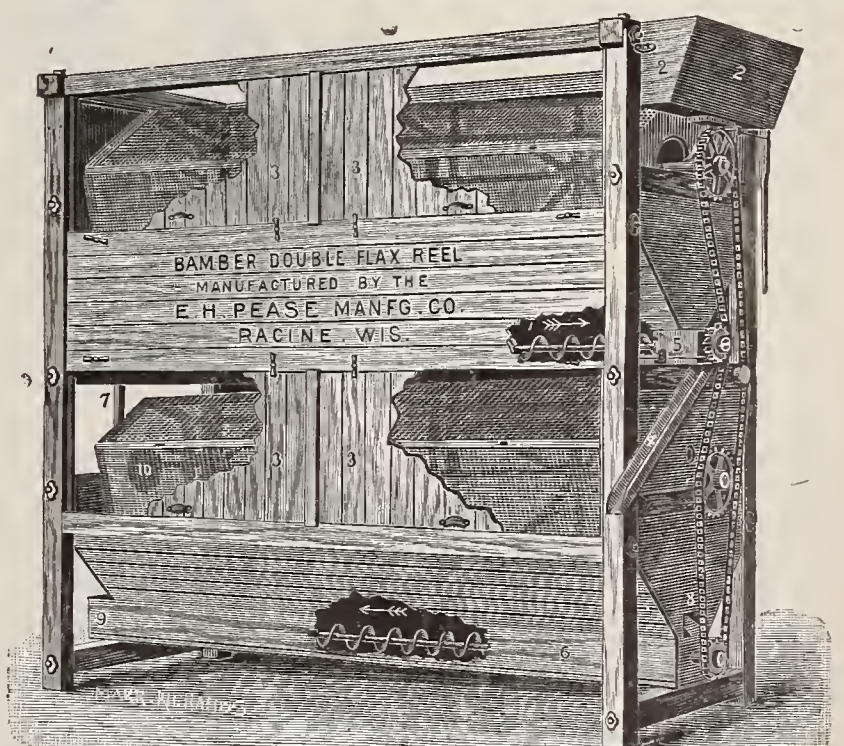
**SAFEST,
MOST DURABLE**
—AND—
POWERFUL PULLER
KNOWN.

HANDLES 1 to 20
Loaded Cars at once
on **STRAIGHT** and
LEVEL TRACK
and pro-rata on
GRADES and
CURVES

"HERCULES" POWER CAR PULLER.

OUR FLAX REELS

Are Adopted and in more General Use by
THE MOST EXTENSIVE FLAX HANDLERS
Throughout the United States, than any similar Machines made



Made with 1, 2 or 4 Reels in one Chest, and with or without
Scalping Shoe."

Reels of any desired style or dimensions made to order.

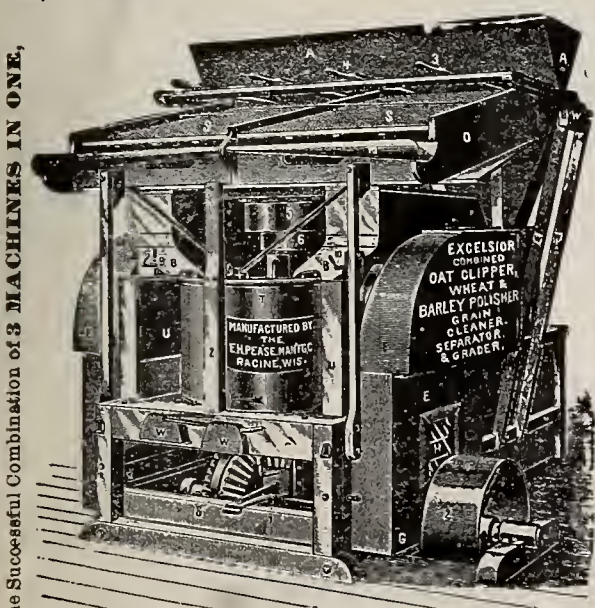
WE FULLY WARRANT
THE
SUPERIORITY
OF THE
MATERIALS USED,
THE CONSTRUCTION and
Operating Qualities
OF ALL OUR
MACHINERY.

ADDRESS

—ALL—

LETTERS CAREFULLY

—TO—



EXCELSIOR COMBINED

Oat Clipper, Polisher, Separator, Grader and General
Dustless Elevator Separator.

This Machine has no Legitimate Rival in the World.
Send for particulars.

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

BRANCH OFFICE, No. 6 CORN EXCHANGE, MINNEAPOLIS, MINN.

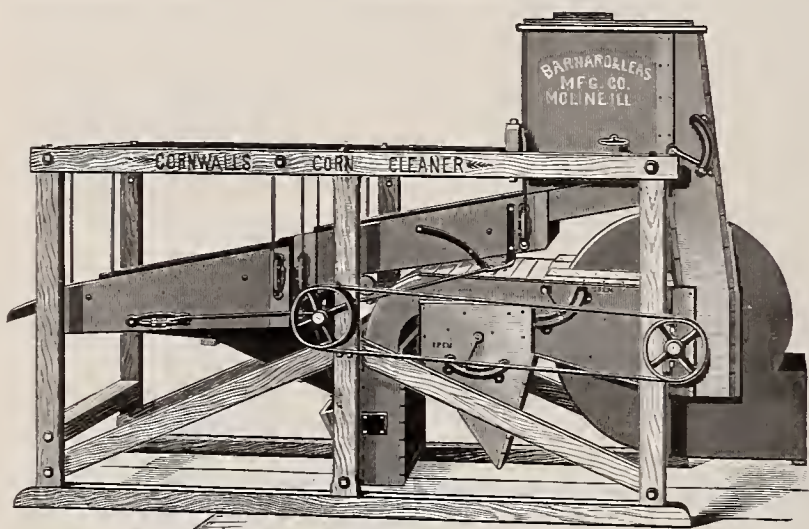
BARNARD & LEAS MANUFACTURING CO., MOLINE, ILLINOIS.

Sole Manufacturers of Barnard's Grain Cleaning Machinery.

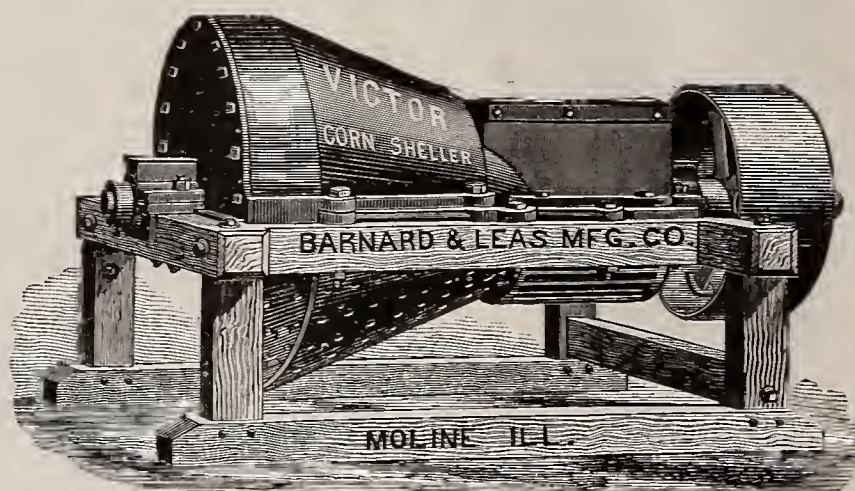
See these machines at work before purchasing.

The Barnard Grain Cleaning Machinery is built in a greater number of sizes, in a greater number of styles, and for a greater variety of uses in the mill and elevator than any other.

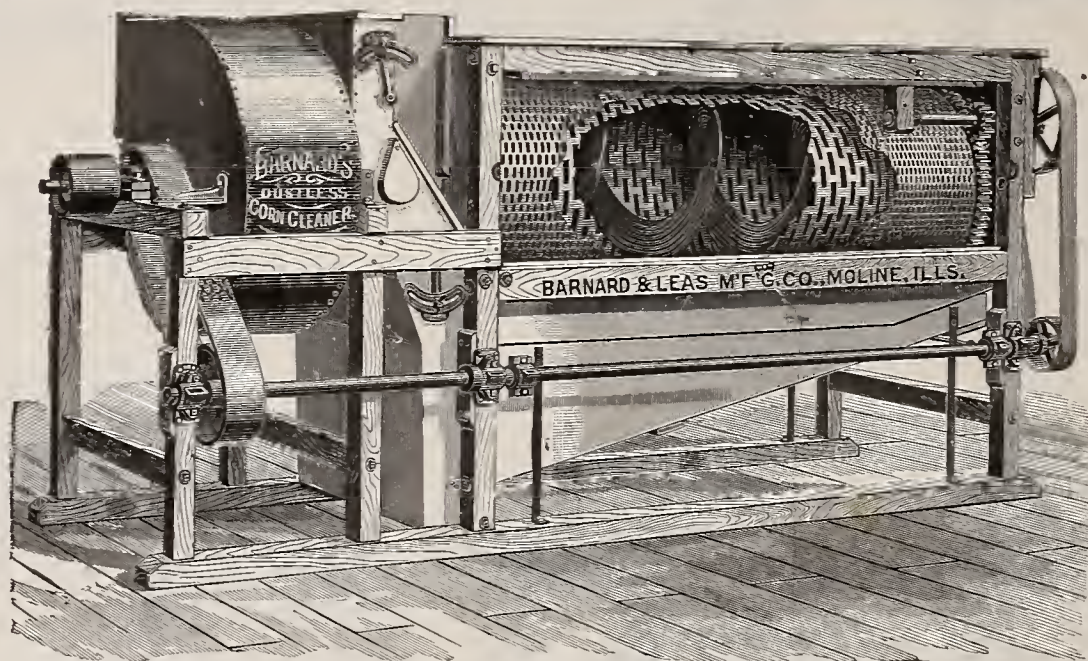
105 Barnard Cleaners were sold during the month of June for mills to be built and remodeled by us, for Elevators and Warehouses and incidental sales.



Cornwall Corn Cleaner.



Corn Sheller.



Double Screen Corn Cleaner.

SEND FOR SPECIAL CATALOGUE OF ELEVATOR MACHINERY.

OUR AGENTS:

M. M. SNIDER, 1325 Capitol Avenue, Des Moines, Iowa,
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Asst. Agent Ind., Eastern Ill.
G. M. RANDALL, Enterprise, Kan.,
General Agent Kansas, Colorado and Oklahoma.
J. H. WILLIAMS, Lock Box 203, Columbus, Ohio,
General Agent for Ohio.
WATEROUS ENGINE WORKS CO.,
Winnipeg, Manitoba.
R. C. STONE, Springfield, Mo.,
General Agent for Missouri, Arkansas and Texas.

W. T. ELLSTON, Springfield, Mo.,
Asst. Agent for Missouri, Arkansas and Texas.
W. H. CALDWELL, Springfield, Mo.,
Asst. Agent for Missouri, Arkansas and Texas.
H. R. STAGGS, Springfield, Mo.,
Asst. Agent for Missouri, Arkansas and Texas.
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C. P. WATTERSON, Farmington, Utah,
General Agent Utah and States West.
E. D. CAIRL, Colesburg, Iowa,
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General Agent for Virginia, W. Virginia, Maryland
and North Carolina.
WM. R. DELL & SON, London, England.

EUREKA



Grain Cleaning Machinery

THE GREATEST VARIETY
THE LARGEST CAPACITY
THE LARGEST NUMBER AT WORK } IN THE WORLD.

THE NEW IMPROVED *Eureka*

*BY Far the
Best Separator
on the Market.*

We make every part of this machine
under our own

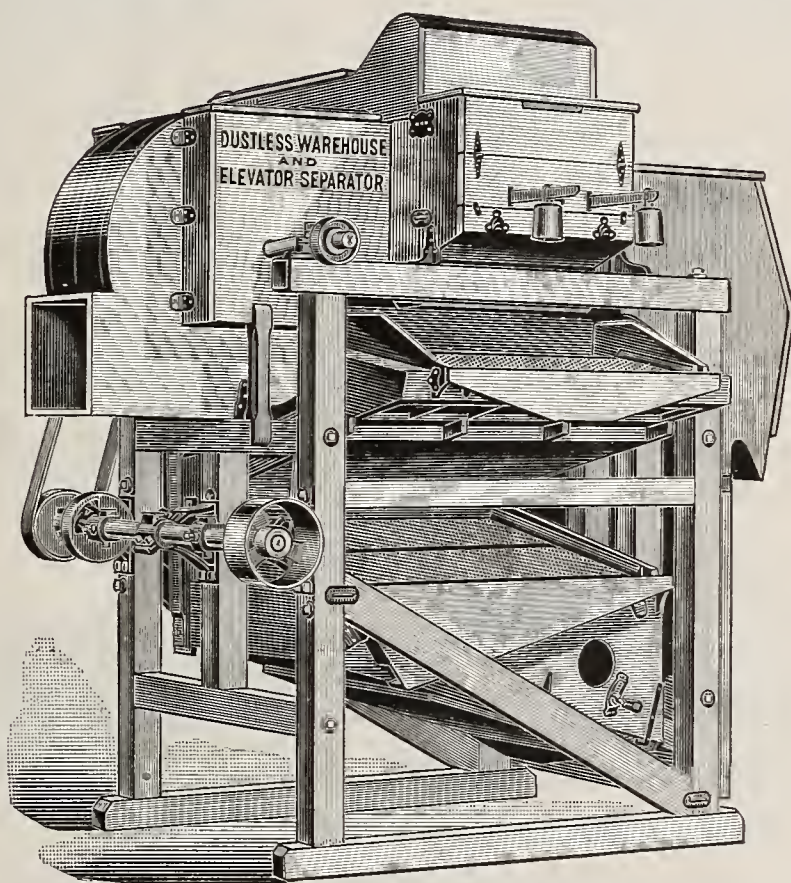
PERSONAL SUPERVISION,

and are thus in a position to guarantee
it as to material and workmanship.

Will positively do more and better
work than any other Separator.

Wide Suction.
Perfect Separation under Control.
Interchangeable Screens.
Large Cockle Screen.
Automatic Feed.

Will run perfectly smooth and quiet.
Has large capacity.



WILL SHIP ONE ON 30 DAYS' TRIAL.

*Warehouse
and
Elevator
Separator,*

WITH LATERAL-SHAKE
MOVEMENT
OF SCREENS.

Conceded by all to be the best arrangement for
ridding grain of impurities. Has Counter balances
and new Pitman Drive.

READ WHAT USERS SAY OF THEM:

CLYDE, N. Y., May 21, 1894.

MR. S. HOWES, Silver Creek, N. Y.

DEAR SIR:—I enclose you check for \$..... to
balance account for the Eureka Warehouse Separ-
tor. I take pleasure in informing you that I am
much pleased with the machine, which has done
good work from the start.

Yours truly, GEO. B. GREENWAY.

YORK, PA., July 18, 1894.

MR. S. HOWES, Silver Creek, N. Y.

DEAR SIR:—We are in receipt of your favor of
the 16th. The Warehouse and Elevator Separator
sold us by you is giving us great satisfaction. We
are not in the habit of recommending any ma-
chines, but must speak well of this one.

Yours truly, P. A. & S. SMALL.

Address **S. HOWES, Silver Creek, New York,**
SOLE BUILDER.

GRAIN CLEANERS.

IF YOU ARE IN NEED OF A PERFECT GRAIN
CLEANER, WE OFFER YOU

The Monitor Separator

These machines have stood the test and are pronounced by leading elevator operators superior to anything heretofore used. Their opinions are based on actual experience.

Nearly all of the leading cleaning elevators built during the last four years have adopted

THE MONITOR

They are simple, yet perfect in construction and durable.

They do the maximum of work with the minimum of power.

They have a powerful, but perfectly controlled air current.

They can be quickly adjusted to do any class of work desired.

They will give you grand satisfaction.

They are modern machines, and you will find them in all of the modern cleaning houses.

If you are interested in this line we ask you to investigate.

BARLEY.

We are making a special **BARLEY CLEANER**
that stands at the head.

FLAX.

Our **Monitor Flax Cleaner** will give you good
results. Close work with large capacity.

Huntley, Cranson & Hammond

SILVER CREEK, N. Y.

B. F. RYER, GENERAL AGENT, 799 MONROE STREET, CHICAGO.



A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. XIII.

CHICAGO, ILLINOIS, SEPTEMBER 15, 1894.

No. 3.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

THE MODERN HARVEST.

The day of the scythe and the flail are no more; machines have displaced them. The accompanying illustrations, which we are enabled to present through the courtesy of William Deering & Co. of Chicago, will convey an idea of the modern methods of harvesting wheat and the immensity of the grain growing tracts of the Northwest. The scenes are from photographs taken during the harvesting of the crops on Oliver Dalrymple's famous farm in North Dakota,

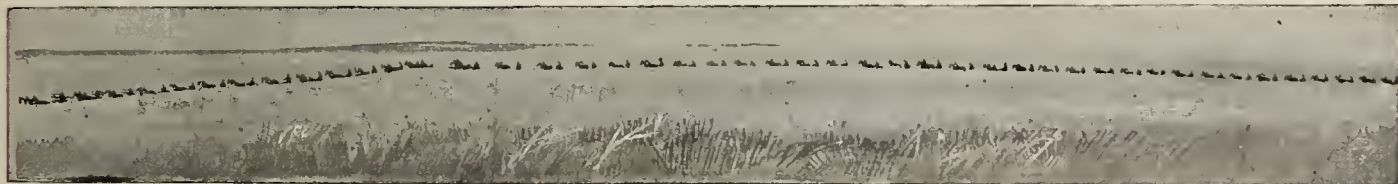
and towns; and North Dakota herself is a wheat-built state, whose prosperity rests upon the chances of her harvests.

IMPROVED TRANSFER FACILITIES NEEDED AT MONTREAL.

Under the head "The Montreal Elevating Company" the *Bulletin* says: So far this thriving monopoly has had a poor season owing to the small exports of grain, but in spite thereof it has just paid an interim divi-

the grain in bigger drafts, all of which should be done more expeditiously and at greatly reduced rates than those now charged for the work performed by old patched-up and obsolete craft. Now that times are slack in the grain elevating business there should be plenty of time for the elevating company to make the necessary improvements, especially as it is well able to afford the outlay of capital. In fact the trade is entitled to it, considering the excessive charges imposed upon them by this company for the elevating of grain at this port. Still our merchants and steamship owners would not object so much to the charges if they received better service therefor. We are not agitating for these much needed improvements without cause, as we believe the company admit they are necessary by promising to make them this spring.

To give some approximate idea of the big profits shoveled up last year by the Montreal Elevating Company, a prominent member of the Board of Trade and Corn Exchange said a few days ago: "I made a careful estimate of the profits of this company last year, and after figuring up the revenue it derived from the exact

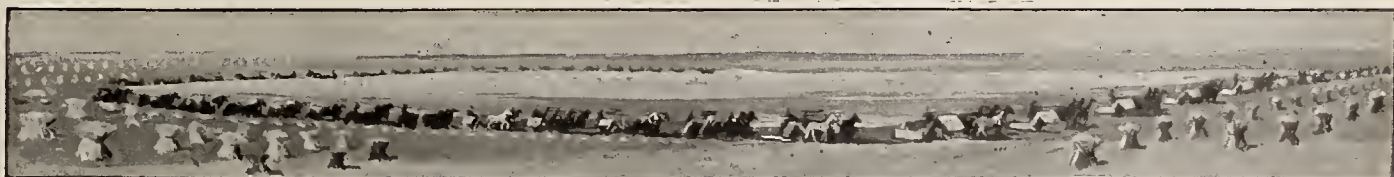


and show the busy season, when these broad prairies, the bosom of nature itself, as it were, are shorn of their product.

In some parts of Spain agriculturists still use a stick to plow. They gather their wheat in armfuls, and pound the grain with a couple of stones in lieu of milling. In other less civilized countries the same ancient methods maintain, where the stick, the ox and the woman are all on the same level. What a contrast this presents!

Not many years ago the plains of the Northwest were inhabited by roving bands of savages. Now with the aid of improved agricultural machinery these lands are cultivated, and in the face of the competition of the great wheat raising countries of the world—Argentina, India and Russia—under disadvantages of shipping and high priced labor, these farms of the great Northwest still supply the old world markets with the best grain.

Oliver Dalrymple is America's greatest wheat farmer. He raises forty square miles of wheat yearly. The cultivation of such farms would be impossible without the employment of modern machinery. This builds up manufactures; it sustains, if it does not create, the shipping industry: it rears elevators, mills



HARVEST SCENES FROM THE GREAT DALRYMPLE FARM.

dend of \$5 per share, or equal to about 12½ per cent. per annum. The immense profits of this corporation last year were such that it can continue to pay good dividends this year and next, business or no business.

Unless we are mistaken, some improvements were promised the trade this spring, which the company can well afford to make, considering the large amount of money it collects from the grain shippers and steamship lines of this port. What the trade requires in order to attract and retain business is the latest modern improvements in elevating, such as greater lifting power and much larger hoppers for weighing

quantity of grain elevated, and making full allowance for the expense of every elevator employed, I estimated that the company must have cleared about \$60,000, on a capital of probably not more than \$120,000 or \$130,000." There appear to be some luscious plums going around in these times, even if business is dull.

The thing to do with the Russian thistle is to discover some use for it and place it under cultivation. This will at once develop a delicacy of constitution and a new insect pest, and the farmer will lose his thistle crop unless he brings forth his spraying machine.

CARELESSNESS OF SHIPPERS AND PRESSERS OF HAY.

From time to time our attention is called to extreme carelessness on the part of pressers and shippers in regard to the pressing and handling of baled hay, and it would seem that, after all that has been said in regard to it, shippers would have learned long ere this that hay pressed with three wires looks neat, can be handled with far more safety, makes a better impression upon the purchaser or consumer, and can be stored more closely and shows a superiority over all other bales, simply because they have used a little more care and attention in preparing it for the market. The cost is such an insignificant feature of the matter, and the savings in broken bales and the scrapings off of the loose ends, and the consequent lessening in weight and value would more than repay for the extra effort.

Very often goods of an inferior quality are sold for a high price simply from the fact that they have been done up in neat and attractive packages, with a glittering label attached, that otherwise would not have attracted attention or been called for. Carelessness has ruined many a merchant who started out with bright prospects, and who would, if he had taken pride in keeping his store in a neat and attractive shape, goods upon the shelves in an attractive form, clean and well appointed, have gained the heights to which he rightly aimed, and while it is true of all other kinds of mercantile business, so also it is with the hay trade.

If you expect to gain and hold friends you must treat them right. If you intend to ship hay and make a business of it, it would pay you to put upon the market the very best goods that can be procured, exerting yourselves to please your customers by placing before them goods, of whatever nature they may be, done up in as tasteful a manner as your ingenuity can devise. In other words bale your hay with three wires.—*Hay Trade Journal*.

CONFLICT OF LAWS WITH REGARD TO DEMURRAGE.

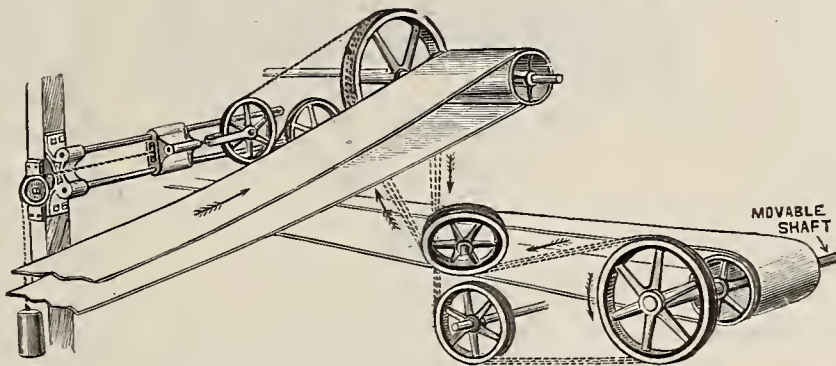
It is remarkable how few cases with regard to the right of railroad companies to charge demurrage have been carried to courts of last resort. It is no less astonishing how inharmonious are the few decisions rendered on the subject. The result is that the railroads insist on charging, and usually collect, demurrage in every possible instance. All kinds of carload freight are liable to this exaction.

The right to demurrage, if it exists as a legal right, the Supreme Court of Illinois maintains, is confined to maritime law, and only exists as to carriers by sea-going vessels. But it is believed to exist alone by force of contract. All such contracts of affreightment contain an agreement for demurrage in case of delay beyond the period allowed by the agreement, or the custom of the port to receive and remove the goods. But the mode of doing business by the two kinds of carriers is essentially different. For example: Railroad companies have warehouses in which to store freights. Owners of vessels have none. Railroads discharge most cargoes carried by them. Carriers by ship do not, but it is done by the consignee. This position is indorsed by the Supreme Court of Nebraska, which declares that it knows of no authority for charging demurrage, unless by virtue of contract, or statutory law, or possibly by such use and custom as may have acquired the force of law.

The consideration which these courts give to this important question, it has been said, is extremely meager, and their weight as authorities cannot, con-

sequently, be considered great. A New York decision is to the same effect in so far as it decides that there is no lien on freight for demurrage. The trouble arose in the first case over a shipment of paper; in the second over a shipment of lumber; and in the third over a shipment of marble. In the last case, where the creation of a lien was denied, the existence of a regulation to make an extra charge for the detention of cars, acquiesced in by the consignee, was deemed to have constituted, in effect, an implied contract, at least, to pay the extra charge.

Opposed to the foregoing is a Massachusetts decision where a railroad company had a regulation and usage by which cars containing certain kinds of goods, among them flour, should be unloaded by the consignee within twenty-four hours after notice to him of their arrival, and for delay in unloading after

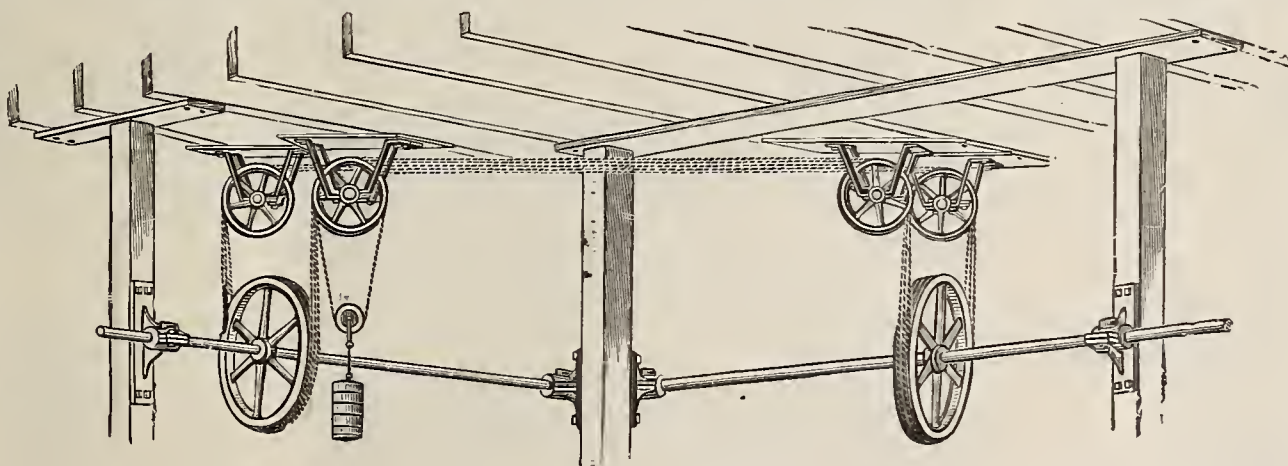


A QUARTER TWIST DRIVE.

that time the company charged \$2 a day for each car which contained such freight and was owned by another railroad company, that for a delay in unloading, the company, in its capacity as a warehouseman, as against a consignee who had knowledge of these facts, had a lien upon a carload of flour for storage.

Likewise the Supreme Court of Georgia holds that it is competent for a common carrier whose customers, at their option, have the privilege of unloading for themselves the vehicles in which their freights are shipped, to adopt and enforce a reasonable regulation as to the time within which the vehicles may be unloaded free of any expense for storage, and to fix a reasonable rate per day at which storage will thereafter be charged for the use of such vehicles so long as they remain unloaded.

Notice before shipment is said to be sufficient to bind customers, whether the regulation is indicated upon the bills of lading or not, and whether the ship-



SHAFTS DRIVEN AT RIGHT ANGLE.

ments are made to the order of the consignors, with directions to notify the customers; or directly to the customers themselves. The same doctrine has been recently laid down by the Supreme Court of Appeals of Virginia, as well as followed by inferior courts of Colorado, Kentucky and Texas. Even in Illinois, one of its ablest Circuit Court judges holds that the "paper" case first above mentioned does not control shipments of such commodities as coal, which cannot reasonably and practically be stored.

The system of threshing by the Chinese is about the same as described by the oldest writer of farm lyrics, Hesiod, who dates before the Christian era to an uncertain period between one and two thousand years. A smooth clay floor is made in the open air; over the grain is rolled a stone roller by a donkey or it is threshed by flail.

ROPE TRANSMISSION.

BY T. K. WEBSTER OF THE WEBSTER MANUFACTURING COMPANY.

Transmission of power by ropes had been used largely in England before it was introduced in America. With the proverbial Yankee instinct for improvement, the English methods were decidedly improved upon. As used in England, each rope conveyed power separately, its weight being the tension which gave it friction on the sheave. It was left for the American to introduce the idea of the endless rope with a hanging or traveling tension carriage with weights to take up the slack and to accommodate this to the varying loads.

The cause of rope transmissions was greatly damaged in its inception in this country because of poor engineering and cheap construction. For awhile wood wheels were used, which, on account of the unequal density of the wood, soon wore the grooves to uneven sizes. This threw the strain on one rope and caused sudden break-downs and short life to the rope. With the advent of iron grooved wheels made after scientific calculations, and the improved tension carriages, rope drives soon sprung into most favorable notice, and their adoption for transmitting power came into successful use.

The great advantage of a rope drive over belting or gears is, first, its adaptability to almost all conditions. It can be run outside in the weather with slight detriment to its usefulness. It can be run in very narrow quarters, turned around corners, run at right angles, crossed and twisted in almost all shapes, and give perfect satisfaction. Besides this it is practically noiseless, and is a positive power, taking up its own slack automatically, and requiring very little attention.

Nearly all the large grain elevators that have been built in the United States in the last three or four years have adopted rope transmission to transmit power in place of belts. While the first cost of rope transmission, that is, the sheaves, is somewhat more than belt pulleys, yet the saving in rope over belt, together with the small cost in renewing the rope over belt, shows to its advantage. Rope transmission having come into such general use, demanded a specially made rope for its purpose. Accordingly, rope with long fibers and laid up in tallow, has been brought into the market under the name of tallow-laid transmission rope. This, together with special devices for splicing, has made the rope transmission nearly perfect as a conveyor of power.

We give herewith several cuts showing how rope can be run. At right angles, straight drives and power taken off from one floor to another. The quarter twist drive with one sheave movable shows a method of driving belt conveyors when running in opposite directions by one system

of ropes and tension carriage. This drive is in actual use in the Ogdensburg Terminal Company's elevator at Ogdensburg, N. Y. The conveyor transfers 12,000 bushels of grain per hour.

The other illustration shows shafts driven at right angles.

A huge ear of corn was raised by J. M. Reynolds of Johnson County, Texas. The ear weighed 27 ounces and contained 1,044 sound grains.

Two years ago shiploads of corn went from Iowa, Illinois and other states to the starving agriculturists of Russia. Now portions of our corn-growing West have been literally burned up, and in the extreme West the farmers face starvation, while the wheat crop is so great in Russia that no attempt will be made to harvest it except by turning live stock into the fields.

METALLIC GRAIN STORAGE BINS.

Edward O. Fallis of Toledo, Ohio, has obtained a patent on a metallic grain storage building of a kind which is receiving considerable attention from elevator men, and which will undoubtedly occupy an important place in future elevator building.

The accompanying drawing illustrates the invention. This building or bin is six-sided, and with a sheet metal hopped bottom. The hopper bottom has horizontal flanges at its upper outer edges and angle irons *M*, which secure to and unite the walls of the bin with the bottom.

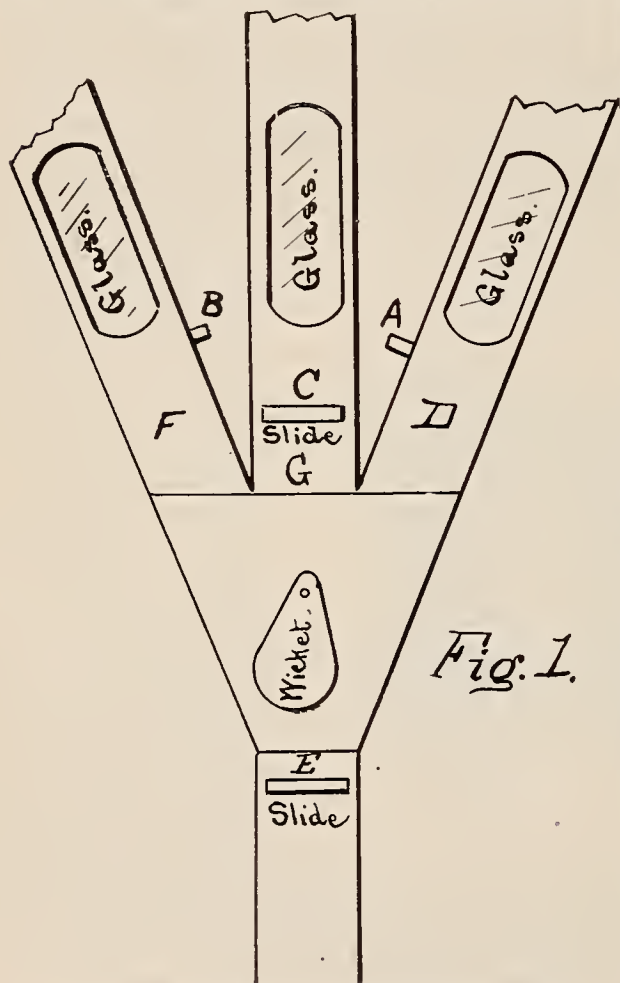
The metal walls of the bin are covered on the outside with blocks of terra cotta or a like substance having projecting legs on their inner surfaces. These projections are so formed that when the blocks are attached an air space is formed next to the exterior surface of the metal wall. Shelves or ledges on the wall are employed in combination with the projections on the blocks to attach the terra cotta.

These bins are erected in series to suit capacity, and one of their great advantages is that they are fire proof. A company has been incorporated at Minneapolis, Minn., under the name of the Fallis Fire Proof Grain Storage Building Co., with a capital stock of \$50,000, for the manufacture and erection of these bins.

ARRANGEMENT OF SPOUTS FOR MIXING GRAIN.

BY J. MAC.

It requires considerable care to mix together unlike grades of wheat or different kinds of grain so as to escape detection by vigilant buyers. A device which will be found very satisfactory and reliable is illustrated herewith. The two mixing hoppers with spouts leading thereto are operated on the same principle. A preference, however, is given for the ar-

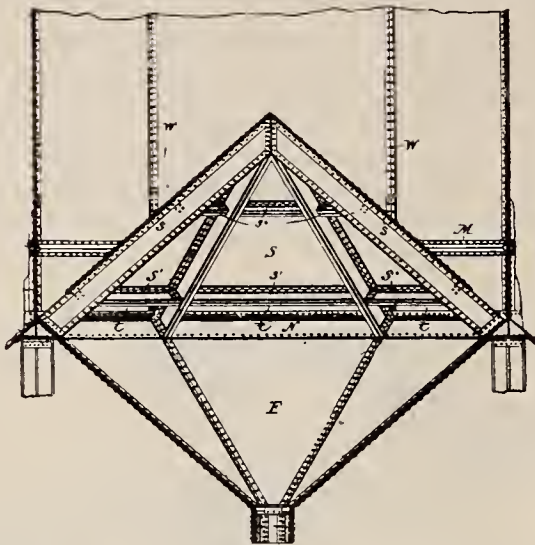


ARRANGEMENT OF SPOUTS FOR MIXING GRAIN.

angement as shown in Fig. 1. This is for the reason that when wishing to mix only two grades of grain you can mix from spouts *F* and *G* as well as from any other two spouts in the system. With the shape of the mixing hopper, as shown in Fig. 2, you cannot mix from spouts *F* and *G*, because the grain from *F* would hold back the grain from spout *G*, giving no chance to regulate the latter. Especially would this be so if grain in spout *F* was heavier than that in *G*.

We will suppose that it is the intention to mix together three different grades of wheat. The manner of operating the mixer is as follows: On starting open the slide in the spout from which the largest amount

of wheat is wanted, to its full capacity. Take, for example, spout *D* in Fig. 2. Then regulate the flow from the hopper with the slide *E*, after which draw slides *B* and *C* and adjust them as desired, regulating the flow of wheat in spouts *F*, *G* and *D* by the motion or speed as seen through the glass above the slides. The flow of wheat from spouts *F* and *G* will control the flow from spout *D*. For an equal



METALLIC GRAIN STORAGE BINS.

mixture the motion must be the same in each spout.

By means of the wicket access can be had at all times to the interior of the mixing hopper. In the construction of the spouts and hopper a little variation in the pitch of spouts makes no material difference. The spouts should be of the same size, however, and the glass should be set on the inside of the spouts and above the slides. The slides may be fastened with an eccentric button. If there are different kinds of grain to be mixed, the manner of procedure is the same as with different grades of wheat. Barley, wheat or rye can be well mixed with this arrangement of the spouts after a little practice. The variation in the weights of the grains to be mixed must always be taken into consideration. Great care must be taken in mixing for a central market, as inspectors have eagle eyes.

ST. LOUIS TERMINAL ELEVATOR.

The terminal elevator, with a capacity of 500,000 bushels net, has just been completed for the Ryan Commission Company, St. Louis. It is built on one of the most advantageous locations in the city, on Second and Biddle streets. The cost, including the value of the property, was \$175,000.

The contract for the whole work was given to James Stewart & Co., engineers and contractors of St. Louis and Buffalo, and active work was commenced on June 15, 1894. The first timber was placed in position on July 16, 1894, and the building finished ready for the roof on Aug. 16, 1894, and in that short time 2,000,000 feet of timber was put in place, making in all nearly 300 cars, and required in all 650 kegs of nails to put same in place.

The building is 82x120 and 160 feet high, making in all 15 stories high. There are inside of the building three elevator legs, each having a capacity of 10,000 bushels per hour; and six 1,000-bushel hopper scales, and two 10-ton wagon scales of the Buffalo make; and the machinery in the upper floors is so arranged that it can be thrown in or out of gear from the lower floor. The elevator is built on 70 large piers consisting of the heaviest kind of dimension stone, and was furnished by the Grafton Quarry. The fire protection for the elevator has been carefully looked after, the contractors having built a heavy brick wall around the elevator 20 feet high, which is seldom done, and also equipped same with fire escapes and hose pipe connections at each floor.

The machinery was furnished by the South St. Louis Iron and Machine Works; the roof is covered with the best composition roofing, furnished and put on by the well-known firm, the St. Louis Roofing Company, of which Mr. John M. Sellers is president. The engine and boiler house is a large one-story brick building, with cement floors, and contains a battery of two O'Brien Horizontal Tubular Boilers of 200-horse power each, a Rankin-Fritsch Corliss Engine of

300-horse power, having a 12-ft. driving pulley wound with eight strands of 1½" tallow laid transmission rope. There is also located in the engine room a feed pump of the Henry Worthington make. The building throughout is fitted with electric bells and speaking tubes.

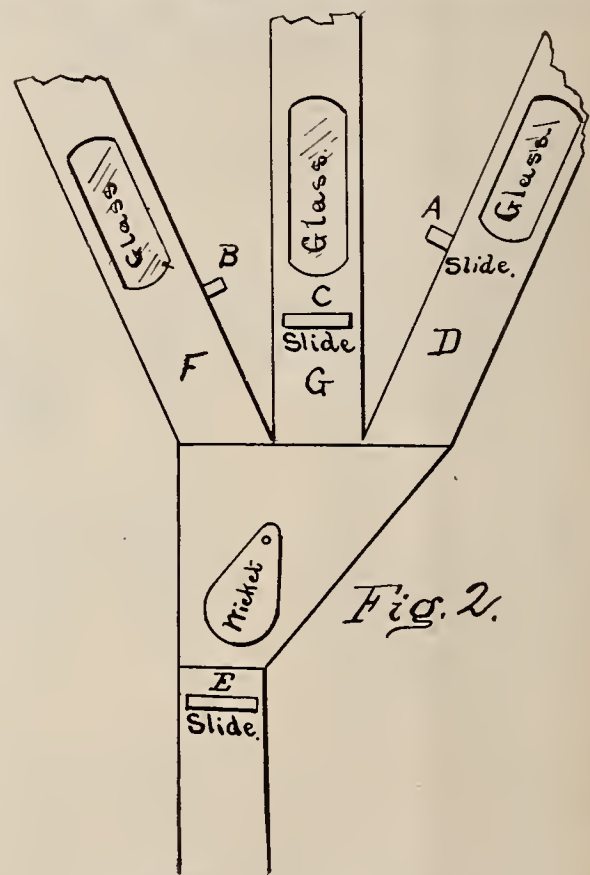
THE STABILITY OF GRAIN SILOS.

NO. II.

The pyramid theory is also a fallacy. Let anyone who may think otherwise support a boarded platform, or an imitation of the hopped bottom of the silo to a reduced scale, in the center of the silo, some distance from the bottom; let this platform be of any convenient size (say 4 feet or 6 feet square), and let it be supported by one or more girders (say wood planks on edge), of just sufficient strength to carry the weight of the pyramid of wheat that will lie upon it. When the silo has been filled and emptied, the girders if of wood, will be found to be broken, and if of rolled iron, bent nearly double, proving that the weight upon it must have been a vast deal greater than that due to the pyramid theory.

As to the pressure upon the sides of a silo, many will be able to indorse, from their experience, the fact that wooden bins have been known to bulge several inches when filled with grain, even when stiffly supported with uprights 12 or 18 inches apart, although such bins have been small in comparison with the silos of to-day. This bulging also applies to wooden silos, built up of layers on the flat, and for that reason they are kept clear of the walls of the main building, as otherwise they would be liable to thrust out the walls. As for brick silos, a year or two ago the outer walls of three grain warehouses—in different places—were lying in the street at one time, all due to the misapprehension of the lateral pressure those brick walls were expected to withstand; and others existing, built upon fallacious principles, have shown by numerous defects that the walls were weak and unstable.

Sufficient has been said, however, to show that the pressure upon the walls of silos is a subject requiring



ARRANGEMENT OF SPOUTS FOR MIXING GRAIN.

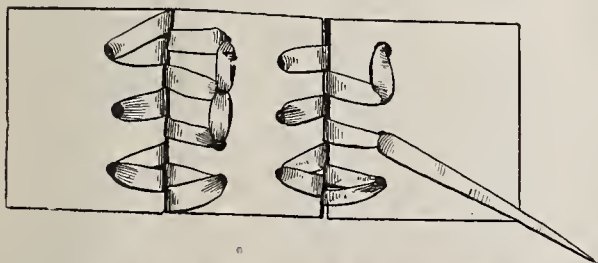
investigation—a subject upon which a leading engineering authority has said that *nothing is known*, and a learned professor has stated that most architects' buildings of a like nature are unsafe. Architects not looking upon the matter in an engineering sense, as a rule, ignore lateral stress, depending, as they do, upon the downward thrust of the floors to make the walls stable, but a silo has no such aid as weighted floors. With a series of silos nested together, the inner walls are buttressed to some extent by the adjoining silos, but the outer walls have no such stiffening or support, but are dependent for their stability solely upon the

adhesion of the mortar, and the staying, if any. Omitting the stays, the lateral pressure required to overthrow such a wall is very little indeed; and the question again arises of how this pressure is to be ascertained.

The pressure due to a bulk of grain, as has been shown, is not similar to that of a solid, or yet to a weight of water, although a curious example, which may here be mentioned, would make it appear so. A wooden spout, $4\frac{1}{2}$ inches square, inside measurement, and 80 feet long, made of $\frac{3}{4}$ -inch white deal boards, leading from the top floor of a grain warehouse down to the basement, through which hard screenings—chiefly seeds, smut and weeviled wheat—from the silo separator, are spouted to the sack at the bottom, when the bag is allowed to fill so that the screenings back up the spout—the spout invariably bursts. This has occurred repeatedly, either splitting the boards or drawing the nails. As long as the sack is attended to there is no trouble, but as soon as the spout is allowed to fill it is sure to give way.

This behavior would appear at first sight to be equivalent to the well-known hydrostatic illustration—given in elementary books on the subject—wherein a long tube, if inserted at one end into the end of a cask, if the tube be filled with water, the pressure upon the tube and cask becomes equal to the weight of a column of water of the height of the tube and of the barrel's diameter; thus, if the area of the tube be one-twentieth of an inch and contains one pound of water, the pressure upon the barrel will be equal to one pound on every twentieth of an inch of its area; no cask being prepared to stand this enormous pressure the hoops fly asunder. However, the more probable cause of the spout's bursting is owing to the wedging of the screenings against the sides caused by the pressure above due to the great head; and this is precisely what takes place in a silo, the lateral pressure upon the sides is also caused by the wedging of the contents due to the weight of wheat above forcing it downward and outward.

As an example of the weight in bulk of contents as compared with the pressure of water, the screenings spout before mentioned will provide a good illustration. The spout, $4\frac{1}{2}$ inches by $4\frac{1}{2}$ inches by 80 feet high, would contain in weight of wheat, when full to the top, $5\frac{1}{2}$ hundredweights, or a little over one-fourth of a ton, while, if taken as for water, substituting the specific gravity of wheat in place of that for water, the result gives the enormous pressure upon each of the four sides of 28 tons. This, it will be seen at once, is a strain that no ordinary wooden spout could stand; and, even when taking into account the theoretical co-efficient of friction for wheat at .5, the pressure upon each of the sides would still be 14 tons average at one-third of



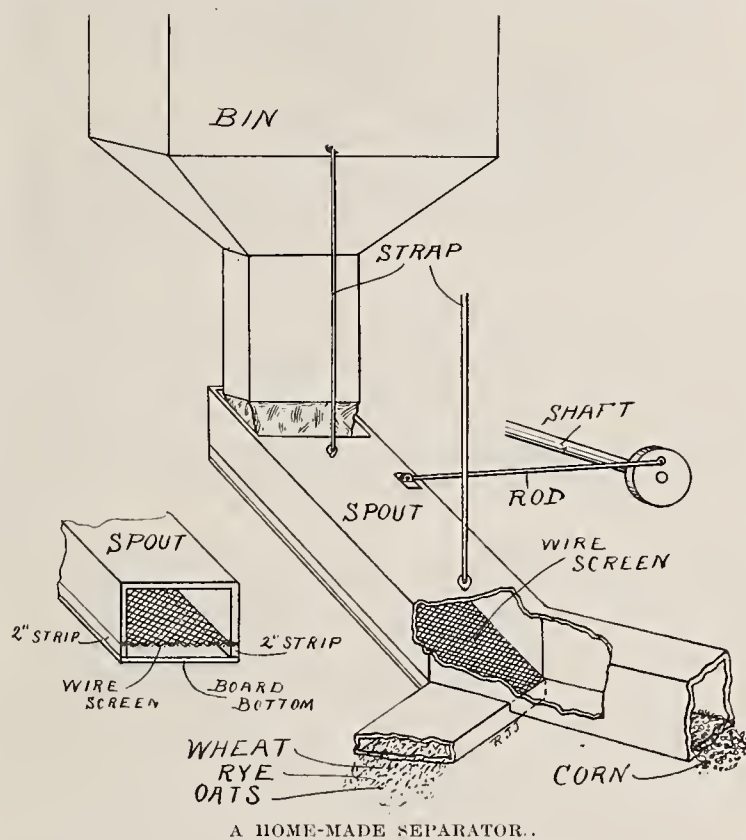
UPPER SIDE—LACING ELEVATOR BELTS.

the height, or $26\frac{1}{2}$ feet from the bottom, this being the center of pressure, the pressure above this point being less, while below it would be greater.

This great pressure is such that a wooden pipe of the kind under no circumstances could resist, while the peculiar twistings and contortions of the spout in question, actually taking place throughout its entire length, would show that internal forces were at work, severely straining the shell or walls of the spout, but instead of failing at the center of pressure, it has always given out somewhere near the lower extremity, and this probably due to the weight of the contents alone in wedging against the sides, and converting the downward to a lateral pressure. The action, it will have been apparent, is not the same as that of water, as has been proved; still the forces exerted against the sides and bottom are dependent upon the head

and weight of the contents, somewhat similar to water, but in a much lesser degree owing to the friction of the wheat grains against each other and the angle of repose at which the layers or wedges of wheat will cease to run.

Proceeding further, with an example of a typical silo of 10 feet square and 60 feet high: If taken as water the pressure upon the bottom of the cell would be equivalent to the weight of the wheat contained; that is, the contents in cubic feet multiplied by the weight of wheat per cubic foot, which gives 134 tons nearly. The pressure upon one side would be the area of one side multiplied by half the head and by the weight of wheat, which gives 400 tons average pressure at one-third height of the silo, so that the pres-



A HOME-MADE SEPARATOR.

sure on the sides by far exceeds the total weight of the wheat itself. And it will also be observed that the enormous pressure, when taken as water, is such that no wall of practical limits would withstand; in fact, the walls would require to be of the nature and dimensions of a water works dam of equivalent height some 12 to 15 feet thick.

Taking the pressure as for a semi-liquid, or as a retaining wall, the mode of calculating would be precisely the same as that for water, except that the result is reduced by using a multiplier or constant for the co-efficient of friction suitable to the material, which for wheat may be taken at .5, which is equivalent to dividing the former result by two; this gives 200 tons, which is still far too high for any ordinary wall, unless very closely stayed with tie-rods in a way that would be impracticable.

The lateral pressure is also still greater than the total weight of the wheat. Such is the peculiarity of the laws of hydraulics, that the accumulative pressure of liquids increases with the height. If the silo was only 10 feet in height, or the same in height as in width, the pressure upon the four sides and the weight of the contents would be equal, but as the height increases above 10 feet (the width in this case), the pressure also increases in an accelerated ratio beyond the weight of the contents.—*Millers' Gazette, London.*

Following is an interesting reflection indulged in by a Chicago receiver: "I have had timothy seed stored in the Sibley fireproof warehouse and the cost was $6\frac{1}{2}$ cents per bushel per year. The public elevators charge about 9 cents per year now for storing wheat. If timothy seed, which has to be handled on trucks in bags, can be stored at $6\frac{1}{2}$ cents at a profit in a fireproof warehouse how much are the public warehousemen making out of the country in charging 9 cents for wheat, which takes up no more room than timothy seed and is much more easily handled? It is to be remembered that the fireproof warehouse made the insurance less on the timothy seed too."

A HOME-MADE SEPARATOR.

BY T. J. B.

A simple and cheap separator for small elevators or country houses is shown in the accompanying cut. By means of this device wheat, rye and oats can be separated from corn, or corn from wheat, rye and oats, instead of shipping it mixed, as is very often the done. When mixed grain is shipped the shipper has to accept a low grading and stand a considerable shrinkage, as in most cases where grain is cleaned at the receiving point it is weighed after cleaning and separating.

To construct this separator remove the bottom from the spout conveying grain from the bin to the elevator boot and replace it with a No. 16 wire screen having $\frac{1}{2}$ -inch mesh. This should be fastened with wooden strips 2 inches wide. A light board bottom should then be attached to the spout, leaving a space of about 2 inches between it and the screen. The longer the spout is the better: 16 feet would be a proper length with a width of 2 feet.

The separating spout should be hung on the bin at an angle of 40 degrees. In the flow of the material the small grain passes through the screen and the corn will run over on top and may be spouted to one side by means of a piece of sheet iron fastened at the lower end in the proper manner. The small grain will run down beneath the screen and may be spouted to the opposite side from the corn in the same manner if desired. If it is convenient the greater amount of cleaned grain may be spouted to an elevator, thus getting rid of the bulk of the material as fast as it is separated.

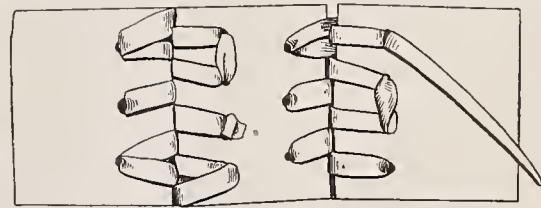
If the bin is near a running shaft of any size a shake can be attached to the spout, as shown in the illustration, without any difficulty, by the use of a small iron rod, a pulley and strap. This will greatly increase the capacity of the separator and will make better work possible than without.

I constructed one of these separators five years ago at a cost not exceeding \$5. It has separated thousands of bushels of grain and is good for five years more. Anyone will save money by trying this little device.

LACING ELEVATOR BELTS.

The accompanying cuts show a belt lacing which may be used on every belt in the elevator from the smallest to the largest, and it will be found durable and satisfactory.

The belt to be joined by this lacing should be cut off square, and one more hole punched in one end than in the other. In lacing the belt the end with the ex-



UNDER SIDE—LACING ELEVATOR BELTS.

tra hole should be held in the left hand and the lacing commenced on the right-hand side. Enter the lace in the right hand hole from the top and draw it down until about 6 inches protrudes on the upper surface of the belt. Bring the other end from below up between two ends of the belt and enter it, from the upper side, in the right-hand hole in the opposite end of the belt.

The lace should be brought up again between the two ends of the belt, and the operation repeated until the belt is laced. In finishing the lace should be run across once or twice in the ordinary way for further security, as is shown in the cuts.

It is about time the west joined hands in a case before the Interstate Commerce Commission to compel Buffalo public elevators to transfer interstate grain at a fair price.—*Toledo Market Report.*

THE COLUMBIA SCALE.

The small cut represents the Columbia Scale made by Kimball Bros. of Council Bluffs, Iowa, who are turning out a first-class scale in all respects: sizes from



THE COLUMBIA SCALE.

two to eight tons. They are simple in construction, well made and just what every grain dealer or stockman should have. The makers put in no cheap material but buy the best. The loops are steel faced and well tempered, which is much better than the usual loop which is made of malleable iron and only case hardened. The levers are extra strong and all bearings are of the best Black Diamond steel well tempered for long life and hard usage. They furnish any kind of beam desired—full draft double index or bushel beams with goose neck extensions of any length desired. Their common scale has a double brass beam, nicely finished, so buyers get as good as the market affords for little money. They will be pleased to hear from anyone and will send full information regarding the scales. If you are near St. Louis write to Munser & Tibbitts Implement Company, or Buford & George Manufacturing Company of Kansas City, or Laurie Implement Company of Keokuk, Iowa, Lindsay Bros. of Minneapolis, Minn., or Milwaukee, Wis. Any of these parties will send full information. Kimball Bros. also build hand and power elevators for all purposes.

Points and Figures.

The watchword of the calamity howler is, "Wheat to the hogs and agriculture to the dogs."

The annual Interstate Grain Palace at Aberdeen, S. D., opened September 14, and will continue until the 23d.

As Iowa and Nebraska produced very little hay this season those states present excellent markets, and large shipments are going thither.

A farmer at Byron, Wis., claims the record of threshing 1,990 bushels of grain, 40 acres of barley and 17 acres of oats in a day and a half.

The Virginia Peanut Association is said to be making efforts to drive outsiders out of the business. The trust has obtained an increase of freight rates.

Ed Lee, Jonesboro, Ill.: "I think a great deal of the AMERICAN ELEVATOR AND GRAIN TRADE. Everyone in any way interested in the grain business should have it."

It is reported that the war between the Buffalo elevators is about over, and that the floating elevators will all be in the pool again before long. This will largely, if not entirely, restore and maintain regulation rates.

As they are the only publications of their kind there is no other possible choice. The AMERICAN ELEVATOR AND GRAIN TRADE and the Hay Trade Journal, a weekly giving reports of all markets, are indispensable, and may be had for \$2 per year.

A number of hay dealers met at Hornellsville, N. Y., August 14 and organized the Southern Central New York Hay Dealers' Association. R. P. Myhers of Campbell was elected president, and W. O. Hallett of Cameron, secretary and treasurer.

The hay crop of the United States in 1893 was 65,766,000 tons, and its value was over \$570,000,000. The drouth will cut it short this year, but it will probably be big enough to exceed the value of the gold output of the country at least thirty or forty times.

On account of the extraordinary advance in the price of corn Kentucky distillers are talking of substituting wheat for corn in the manufacture of whisky. In the excitement which followed the announcement the Owens-Breckenridge issue was forgotten, and

people are asking in a muffled breath, "Where are we at?"

Grain men at Seymour, Ind., have been for some time suffering from the depredations of a gang of wheat thieves. A number of small boys have at last been arrested and have confessed. The storage and sale of several hundred bushels of wheat was traced.

Twelve acres of oats in Indiana were burned recently in a rather peculiar manner. The fire started from a locomotive spark, and the peculiarity is that over the whole 12 acres only the heads of the oats were burned, the straw standing as thick and erect as ever.

Hundreds of horses belonging to the Armour establishments in Chicago have been fed on a mixture of half wheat and half coarse grain as an experiment, which is said to have given complete satisfaction. Feed men in Chicago say that but very few of the livery stables are feeding oats.

The Interstate Commerce Commission is considering the charges against the Atchison, Topeka & Santa Fe Railroad of the remission of millions of dollars in rebates to shippers. Such a practice is violation of the Interstate Commerce Law. Other roads, it is alleged, are guilty of a like offense.

Flying Bones and Mat Ailep, two negro grain thieves, were caught red-handed while stealing grain from freight trains in Kansas City recently. Flying Bones was true to his name and attempted (in vain, however) to convince himself of the enchantment of a long distance. The two are thought to be members of a gang that has been systematically stealing grain for some time.

A car of timothy seed, which has been in storage in a Chicago warehouse for four years and eleven months, was sold recently. The storage was 6½ cents per bushel per year—about 33 cents per bushel for the entire period. The storage on wheat, corn or oats for the same period would have been 60 cents per bushel—almost double the amount. The seed paid a profit to the holder of about 15 cents per bushel.

Reports from 3,057 reliable grain dealers and millers throughout states which raise two-thirds of the winter wheat crop, or nearly one-half of the entire wheat crop of the United States, show that while the amount of wheat to be fed to stock is still uncertain, at least 15 per cent. may be disposed of in that way. The amount of wheat fed to stock depends very much upon the relative market value of wheat and corn.

They have a novel method of killing crows in Georgia. Grains of corn are pierced, and through them is inserted a hair from the tail of a horse. These are scattered in the fields where the crows feed. When a bird swallows one the hair prevents it passing into the craw and irritates the mouth. The crow rolls over, turns on its back and scratches to get it out, but to no purpose. Death results either from strangulation or, as is frequently the case, from the wounds inflicted by its sharp claws.

Preposterous though it may seem, an Omaha Indian, known for his rain-making qualities, went to a prosperous farmer named George Anderson, who lives three miles north of Decatur, and told him he would make it rain if he would give him some money. Anderson, having about a thousand acres of corn planted, was naturally interested and told him to go ahead and if it rained he could get money. So the Indian started in and kept up all sorts of motions throughout the day, and that night, says Mr. Anderson, it rained harder than he had seen it rain for a long time.

The Liverpool *Corn Trade News* says that the combined American and Russian crops of wheat, maize, oats, rye, barley and buckwheat together are 416,000,000 bushels less this year than in the Russian famine year of 1891, and adds: The future of wheat prices promises to be largely shaped by the action of the demand for feeding stuffs during the next eight months, and it would seem as if the despised but eminently useful American hog were about to extricate the long suffering wheat holder from the abyss of his misfortunes, where he has been long left struggling, in spite of his own exertions and the well intentioned but futile efforts of American millionaire speculators.

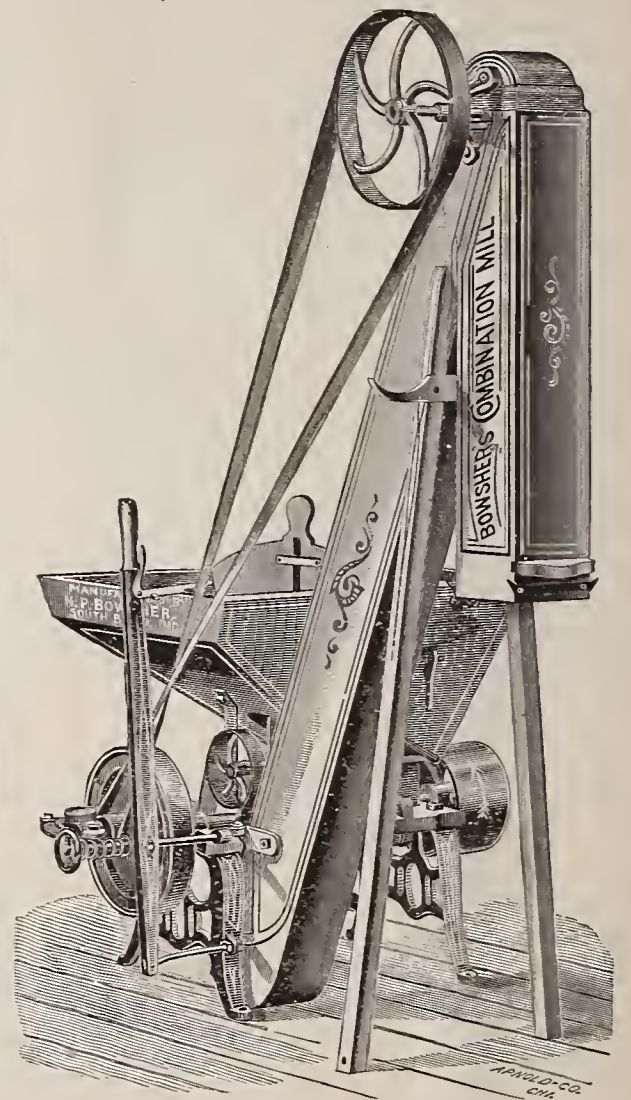
BOWSHER'S "COMBINATION" FEED MILL.

We show in the illustration given herewith a machine that may be already quite well known to many of our readers. The mills have been in use for six years. Among the many testimonial letters shown by Mr. Bowsher, the strongest recommendations come from firms who have had previous experience with other mills, in some instances three or four other kinds, and it certainly is very gratifying to him that such firms favor his mill.

The "Combination" Mill will crush and grind ear corn, and also grind every kind of small grain, oil cake, etc. Having a divided hopper, it will also crush ear corn and grind wheat or oats or other small grain at the same time, mixing the two in any proportion desired.

In the Bowsher Mill the work is done on conical shaped grinders, which give a large area of surface close to the center of the shaft, thereby making a light running mill. By this means it is claimed that as much grinding surface is secured within a diameter of 8 inches as can be had in a diameter of 14 inches in a disk mill, insuring a difference in running qualities that will be instantly appreciated by all machinery users. Another important advantage is the fact that the grinders will not strike together when the mill runs empty, a feature that will obviate much mental anxiety on busy days, as well as effect a large saving in running expenses. No gearing is used about this mill, and it is a very quiet running machine.

For use in elevators, feed stores and other places where a variety of custom work is handled the Bowsher Mill is especially appreciated. It is a very com-



BOWSHER'S "COMBINATION" FEED MILL.

pact and neat appearing machine, and, when fitted with the elevator shown in the cut, forms a complete, independent outfit for feed work, and at small cost. The elevator is not necessarily a part of the outfit, but is offered to those who wish it.

Three sizes of the mills are built—2 to 6, 6 to 8 and 8 to 12-horse power, thus happily adapting them to the variety of powers commonly found in elevators and feed stores. These mills made the largest and handsomest display of the kind at the World's Fair, and were awarded the medal.

The manufacturer, N. P. Bowsher, South Bend, Ind., lays considerable stress on his claims that this

is the best "all-around" feed mill in the market, and he will be glad to send illustrated circulars and any desired information to those who apply.

PORTABLE DUMP FOR CRIBBING CORN.

The drawing presented herewith shows a recently patented corn cribbing apparatus or machine invented by Lodrick M. Millen of Elwood, Neb.

The apparatus consists of a platform having an intermediate tower within which moves a car, the car fitting into the recess in the platform beneath the tower. The car has a reversible bottom which may be pivoted to either end, allowing corn to be dumped on either side of the platform as desired. The top of the car is furnished with a trap door to receive grain from the wagon.

The modus operandi with this simple contrivance is as follows: A wagon is drawn upon the platform at the left, stopped over the car which fits into the recess below and the corn is dumped into it. As the empty wagon is drawn off the platform on the other side of the car an elevating rope connected with a ring at the top of the car is hooked to the wagon. Thus the loaded car is elevated in the tower, the pivoted bottom lowered by an easily worked mechanism, and the corn dumped into a chute to the corner.

This machine seems to be of practical utility, and will doubtless be found to facilitate the cribbing of ear corn. The platform with its apparatus is portable and may be carried from one crib to another or be placed between two cribs, each of which may be filled with equal facility.

THE KEELEY CURE FOR GRAIN.

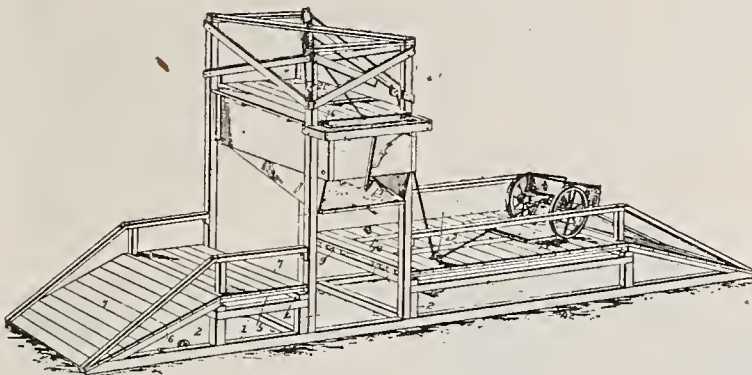
The Keeley cure has, up to date, been applied only to mortals who were out of condition, but a genius in Chicago, whence come so many geniuses, both good and evil, has discovered a sort of Keeley cure for wheat, and is sending circulars and letters to elevator men, soliciting a trial of his remedy, significantly saying that he will consider correspondence "strictly confidential." This gentleman has what he calls an "antiseptic powder," put up in tin cans, containing, according to his circular, "one charge" each.

He says that if given his treatment "weevil wheat will lose all its terrors," musty wheat "yields quickly to the action of this powder and will readily grade by mixing a choice No. 3 or a good No. 2" (proportion not stated, probably through oversight), smutty wheat will have its obnoxious odor removed, bin-burned wheat will be deprived of its bitterness and improve in its complexion, hot wheat will be turned from its evil ways, and after one "charge" will never get hot again, musty oats will be recalled to paths of freshness and rectitude, and, in short, all drunken, dissolute and abandoned grain can, by being properly "charged," be converted into a respectable, law-abiding and useful cereal, and the dreaded inspector be none the wiser.

The powder is not expensive, says the Chicago genius. One charge, sufficient for one car, can be had for \$3, but for \$25 enough can be purchased to cure ten cars. Furthermore, if you will send on a sample

of dissolute grain he will treat it at home and return it to you completely cured, an example for other unfortunate grain to follow.

We doubt whether very much grain will be treated to "charges" of this ingenious powder, but millers who have to grind the reformed wheat might as well keep their eyes open. While it is all very well, perhaps, to turn erring grain from its evil courses, and, while "charging" it with "antiseptic powder" may make it acceptable to the inspector, the miller who tries to make sound flour out of the mess will not have a winter full of unalloyed happiness before him, and



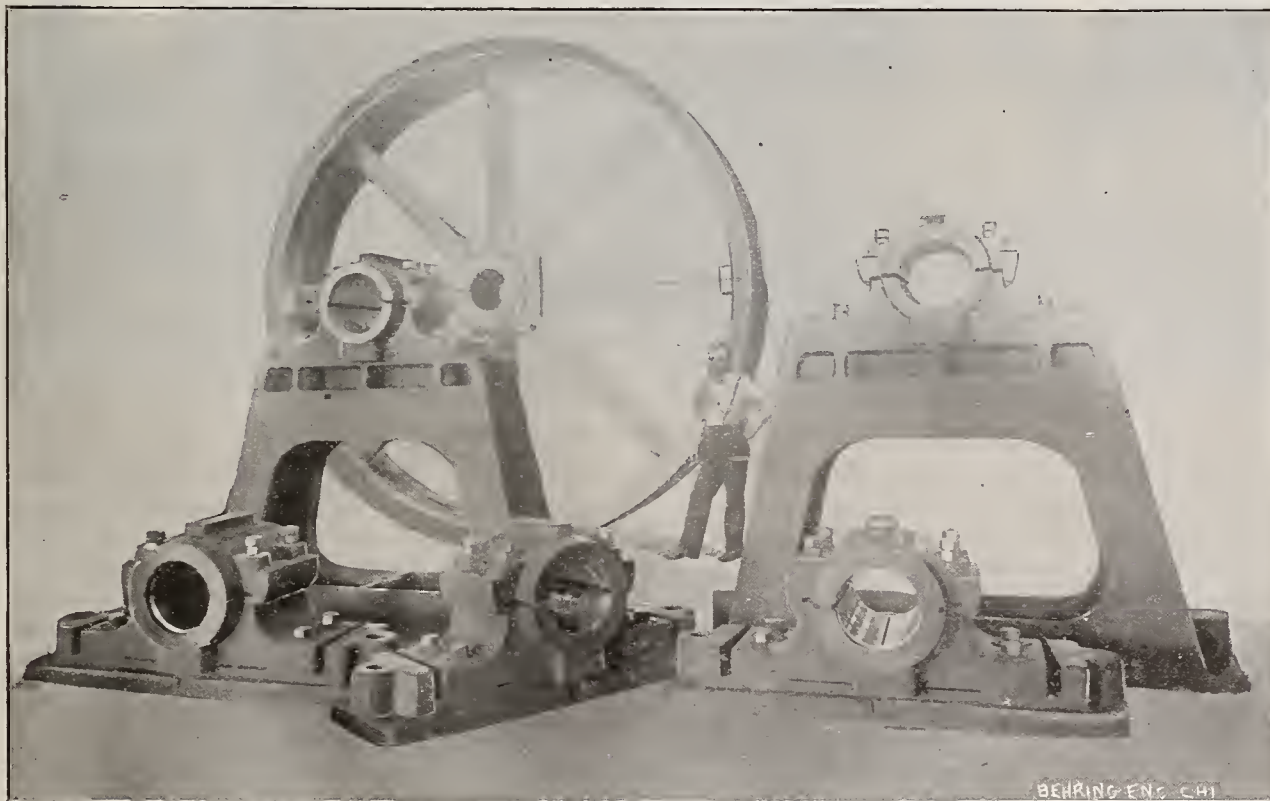
PORTABLE DUMP FOR CRIBBING CORN

will wish that the Keeley cure for wheat had never been invented.—*Northwestern Miller.*

A 1,200-HORSE POWER ROPE TRANSMISSION.

The Link-Belt Machinery Company, Chicago, has just completed for the C. C. Washburn Flouring Mill Company, Minneapolis, Minn., the machinery for a 1,200-horse power rope transmission.

The motive power is a large triple expansion engine made in Germany and exhibited at the World's Fair. To this is coupled a steel shaft 31 feet long, in two pieces, 11½" in diameter swelled to 15" to receive the fly wheel, which is 14 feet in diameter with 20 grooves



A 1,200-HORSE POWER ROPE TRANSMISSION.

for 2-inch rope, and weighs 38,000 pounds. This shaft is supported in pillow blocks on heavy cast iron sole plates on stone foundations. From fly wheel power is transmitted to a sheave 10 feet 8 inches in diameter having 20 grooves for 2" rope, weighing 21,500 pounds, and having a single idler of the same diameter running loose on each side of it leading the rope off to the tension carriages. This driven sheave is put on a cast steel quill 15 inches in diameter, weighing 4,000 pounds, which runs on its own bearings. The mill shaft passes through this quill and receives the power from it by means of a pair of flanged faced couplings. The bearings for the quill are set on cast iron pedestals 5 feet high. Each pedestal and pillow block weighs 7,700 pounds. These pedestals and pillow

blocks are shown in cut herewith. Two tension carriages with 7-foot sheaves and 3,600 feet of 2-inch special red thread manilla transmission rope complete the drive.

FEED GRINDING.

BY F. RIDDELL.

One of the curiosities of the present anomalous times is the fact that wheat is, pound for pound, cheaper than corn. Another is that all kinds of grain vary so little in their price per 100 pounds. It is evident that a great deal of feed shipping will have to be done this winter in order to equalize the supply, which, while abundant in some localities is scarce in many others. A market will be opened in which the elevator operator who is prepared to take advantage of it may profitably dispose of much of his screenings, etc., which would otherwise be lost, besides making more profit out of much grain which would grade rejected or below on the market.

My article in the AMERICAN ELEVATOR AND GRAIN TRADE for July gives a general idea of the kind of machinery and capacity required in a feed grinding plant, to which may be added that where it is expected to ship in carload lots, as is necessary for anything but a local trade, it is essential that an elevator be so arranged that the feed may be run directly into the car from the rolls, as not only is it difficult to run ground feed out of a bin on account of its packing in, but it is impossible to make it stay mixed, no effectual means for suspending or counteracting the laws of gravitation having yet been discovered. For the same reason it is always a hard matter to grind out of a large feed hopper and have the meal run fairly even. The easiest means of approximating perfection in this matter is to have a spout from a bin of each kind of grain run into the feed hopper of the grinding rolls and regulate the cut-off on them until the desired mixture is obtained. While it might seem to be an

easy matter to draw out of a bin for the retail trade a mixed feed just such as had been put in, it is by no means the case. The heavier part of the feed runs down first, so that while the first few bags may weigh from 80 to 100 pounds, by-and-by the average weight may drop to 50 or 60 pounds. The only effectual way to prevent this that I know of is to let the bottom of the feed bin come down as wide as possible to the lower floor and fill the bags with a scoop.

As none of the domestic animals require a highly concentrated food, the way is open for mixing in with ground feed everything that is not deleterious, even if its

feeding value is very slight, so that it would seem to be policy for the grain shipper to give particular attention to cleaning all the grain he may handle up to the limit of his machinery's ability in that direction. For instance, if he has a wheat separator the suction may be set so as to lift out even the lighter of the slightly shrunken grains, while the sieve is fed grain heavy enough to run over nearly all the oats and white caps. This will improve the appearance of the grain amazingly, while the screenings and tailings together will make excellent ingredients in feed. So of the other grains which he may have facilities for cleaning. While the cleaning process will increase the value of the shipping stock, what is cleaned out will be worth nearly as much for feed. In feed for

cows, whose digestive organs require that their food consist of rather bulky materials, a good deal of light stuff, such as light oats and light, fluffy materials such as the clean-out of flax and various other seed, may find a place with advantage. If a little of the flaxseed itself should get into the feed no harm would be done. The seeds which in some seasons abound among oats have been found to make excellent food for dairy stock.

While thus utilizing what would otherwise be waste products, of course it will be found that even the best of the grain may be profitably converted into feed. The question will often arise, "What can I grind that will make the best feed, which I can sell at the lowest price and yet make a fair profit?" The answer to this will depend largely on the locality both as to what grain is to be most cheaply procured, and as to what the feed requirements of the neighborhood are, but a few hints along that line may not be entirely out of place. For dairy stock a mixture of oats with either corn, wheat or rye will make a good feed. The larger the proportion of oats, other things being equal, the better the feed will be. Should barley be as cheap or cheaper than oats, some of that grain may replace the oats without injury to the quality of the feed. For horses a smaller proportion of oats can be used, while for swine they may be entirely omitted. I am aware that these are very vague hints, but while I have had a good deal of experience both in feeding and grinding, so much depends on local conditions as to prices, etc., that without knowing these conditions I do not feel able to advise, merely throwing out these general remarks by way of pointers.

As feed is sold by the ton, in order to know the price at which it should be sold, the weight per ton of the grain ground requires to be known. This, of course, is easily figured out by dividing 2,000 by the number of pounds in a bushel of the grain. Thus, for oats, in this state, $2,000 \div 32 = 63$; for corn, $2,000 \div 56 = 36$, and so for the others. But as grinding is commonly done by the bag, bulk instead of weight being the criterion, it is customary, where the rate for grinding is 10 cents per bag, to multiply the number of bushels in a ton by 5 and add it to the price of the grain per ton. Then if we grind a mixture of corn and oats of even parts (by weight), to find what it is worth we add the grinding and cost of grain together. Thus:

One ton oats at 30 cents per bushel (63 bushels)	\$18.90
Grinding @ 5 cents per bushel	3.15
One ton corn at 50 cents per bushel (36 bushels)	18.00
Grinding @ 5 cents per bushel	1.80

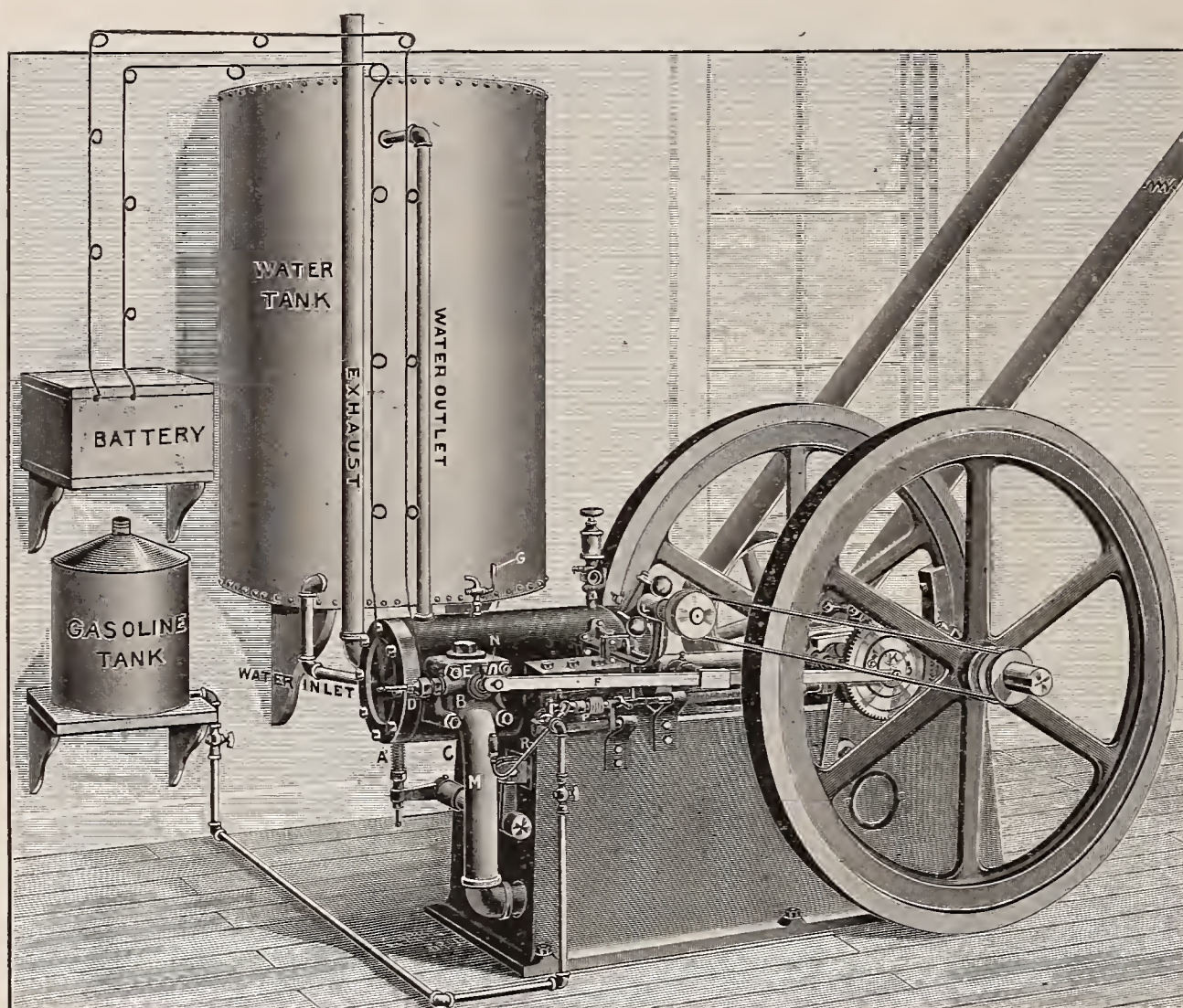
241.85

Cost per ton.....\$20.92½

Roughly speaking \$21=\$1.05 per 100 pounds. As the more common practice, however, is to mix by bulk rather than by weight, it is not often that this example would be strictly correct, but the principle remains the same. In cases where rye forms part of the mixture 5 cents per bushel is too low a price for grinding, 7 or 8 cents being nearer the proper cost.

It is seldom necessary to consign shipments of feed to be sold on commission, as in all the places where there is a demand for it dealers may be found who

will buy it direct: and as generally shipped sight draft is attached to bill of lading, so no trouble is had in making collections. As in all other kinds of business, it pays in the long run to furnish a quality of feed fully up to the representations made. In cases where special circumstances call for a variation from what has formerly been supplied, full explanations are due the purchaser and a fair allowance in price made him for any falling off in quality for any cause. Perhaps nothing helps the looks and consequently the sale of feed more than fine grinding, and it would seem to be the part of wisdom in arranging to carry on the business to be sure to have enough power and grinding capacity to do good work in that direction. Even and smooth feed cannot be produced unless the grinding machinery can be run at a regular speed and without undue crowding in the effort to do a large amount of work for its capacity, and the extra cost involved in providing the greater power and roll surface required will be more than repaid in the in-



THE FOOS GAS AND GASOLINE ENGINES.

creased business and better prices received for the product.

While the close attention and skill required in the making of flour are not required in the grinding of feed, yet there are many things entering into its proper and profitable manufacture which require consideration. Fortunately the most of these are of such a nature as to admit of their being mastered in the progress of the business, so that one having a proper equipment and location may go into it with a reasonable prospect of success and with the possibility of increasing his profit as his knowledge of its requirements extends. Should any further information be desired, which is in my power to give, enquiries through the AMERICAN ELEVATOR AND GRAIN TRADE will be cheerfully answered.

That our wheat will be affected in price by the corn situation there is no doubt. The only question is the extent of it. A few cents only of additional price for wheat may be secured, but on the other hand, when the cost of corn and the cost of wheat widen, as they will, most assuredly, in favor of wheat, the spread may be either by the increase of wheat values, or the reduction of corn values, or both. Upon that may depend considerably the future values of wheat.—*Minneapolis Market Record.*

THE FOOS GAS AND GASOLINE ENGINE.

For many purposes, and for many reasons, gas and gasoline engines make an efficient power. They are now coming to be used extensively in elevators and mills, and if the selection is wisely made the engine can be operated economically and safely, there being no danger from explosion or fire, no time wasted in waiting for the start-up, and a great saving in labor, space and many incidental expenses. A gas engine once started runs itself.

The Foos Gas and Gasoline Engines are claimed to possess all the advantages that a model motive power should have. Certainly the neatness and simplicity of this engine and its surroundings, as shown in the accompanying illustration, will please the eye of every elevator man. This engine can be run with manufactured or natural gas or gasoline, and can be changed to either at will. The Foos Engine is so

simple in construction that it can be readily taken apart and can be operated by anyone of average intelligence. The gasoline tank should be placed outside the building. The water tank may be of wood or iron. The water is used around the cylinder to keep it cool. Only a small amount of water is used, a few gallons added to the tank daily being sufficient.

The different parts of the engine are shown in the cut. At A is the exhaust pipe, chamber and valve. At B is the exploding chamber, C the inlet valve to same, and D and E the electrodes connected with the battery furnishing the current to ignite the gas in the exploding chamber. These explosions are regulated, reducing or increasing the speed of the engine, by the rod F connected with the disk crank K. The speed is controlled also by the governor springs L, which are

very sensitive. Gasoline is conveyed to the exploding chamber through the pipe connected with the pump P, and if too much gas is let in it escapes by stopcock G. The motive power is produced by pure air being drawn into pipe M and there mixed with a few drops of gasoline thrown into this pipe by pump P at every other revolution of the fly wheel, and thence drawn by the suction of the piston in its outward movement into the cylinder through exploding chamber B, this mixture of air with the gasoline forming a highly explosive gas which is compressed by the return movement of the piston, and then exploded by an electric spark, producing a very high power by the expansion of the gas.

The cost of operating the Foos Gasoline Engine of 2-horse power is said to be about 1½ cents per hour. It is claimed that these engines can be allowed to run for months without cleaning or other care than being well oiled and the battery kept in working condition. Full information regarding the Foos Engine can be obtained by inquiring of the manufacturers, The Foos Gas Engine Company of Springfield, Ohio, who print many letters from those who have used their engine and found it came up to the guaranteed claims.

Flax is known to have been grown by the Egyptians B. C. 2000.

CONSIGNING AND SELLING ON TRACK.

Recently we sent the following letter to a number of country grain shippers in hope of being able to inform our readers what other shippers were doing and what in their opinion were the advantages of consigning and selling on track:

Dear Sir:—The experience of so many country shippers who have accepted track bids has been so unsatisfactory that we are prompted to ask you to give us for publication in the next issue of the AMERICAN ELEVATOR AND GRAIN TRADE an account of your experience in selling on track. What in your opinion are its advantages over consigning?

How often have you had "a sure profit" by a sale on track swept away by leakage in transit, dockage at terminal, or faulty grading? Through what other loopholes has your "sure profit" disappeared?

Why do you prefer to consign rather than sell on track? What percentage of your shipments do you consign?

A few of our friends have kindly favored us by replying, and we trust that others will send us a statement of their opinions and experience in selling grain.

There are some grain dealers who believe a part of the world is outside of their immediate neighborhood, who are not overburdened with the idea that they know it all and that the experience and opinions of others are worthless; they are always anxious to progress and to learn what others are doing, and are ever willing to freely exchange opinions with their brother dealers. The following letters are from men who belong to this class.

GOVERNED BY MARKET.

Editor American Elevator and Grain Trade:—We have no complaint to make as to the handling of our grain at terminals. When sold on track the grain has invariably been satisfactory. We are governed by market indications as to selling or consigning.

Respectfully,
LADD & TAYLOR.
Andrews, Ind.

SECURE SURE PROFIT BY SELLING ON TRACK.

Editor American Elevator and Grain Trade:—Our experience with track buyers has been very satisfactory, and the advantage of track buying is simply "sure profit." Our track sales are mostly of corn shipments going to interior points. We guarantee the weights at final destination to be within 1 per cent. of the amount given in bill of lading. Probably 2 per cent. of our shipments are below the guaranteed weight, but we have yet to receive the first complaint for faulty grading.

Everything is sold as soon as bought, whether for interior or seaboard market, and nothing consigned. In our opinion that is the only safe way.

ANDERSON & BRO

Anderson, Ohio.

PROFITS ESCAPED BY SHORT WEIGHTS AT TERMINALS.

Editor American Elevator and Grain Trade:—I have been in the grain business here for seven years, and have sold almost all of my grain, consisting mostly of corn, on track, and have accepted terminal weights. There is where my profits escaped. The first two years that I carried on business my grain went to St. Louis and my weights were satisfactory on the whole. Since that time, or for about five years, I have sold mostly at Leavenworth and Atchison, Kan., and the shortages have been very heavy.

The only advantage of selling on track consists in the chance of selling during bulges in the market. If the year gives a full crop we sell ourselves short a good deal of corn in the late fall when we see the corn coming. But we will not be rushed any this year, for Nebraska has no corn to spare.

Very truly,
S. D. EELLS.
Elmwood, Neb.

PREFER TO SELL THROUGH BROKER.

Editor American Elevator and Grain Trade:—We have consigned less than 10 cars out of 175 shipped this season. We feel that the only way we can afford to handle wheat is by selling as fast as we buy. We prefer to sell our grain through a broker, and in that way we have some of the advantages derived by consigning.

We find that the grain men in the city "stand in" better with the inspector than the shipper, and that he always gets the benefit of any doubt. Although we have not had a great deal of trouble on that line this season we have had some trouble about weights,

in fact, to an unreasonable extent. But these things always have existed to a greater or less extent, and we think they always will exist.

We can afford to sell to some for one-half less than others offer and get a square deal. We still have enough confidence in the human race to believe that there are still a few honest men. But the earth is not too well salted with them.

This that we have written is the same old story, and we know of nothing new.

Yours truly,
CARR & DIXON.
Argonia, Kan.

LOST BY SELLING ON TRACK.

Editor American Elevator and Grain Trade:—As to our experience in selling on track, we would say that our sale of one car to an East St. Louis grain and elevator company, sold on track here to their traveling man, was an entire failure. We showed the traveling man a sample and sold at 43 cents a bushel. The railroad strike came on; there was delay in shipping and a decline in the market. The purchaser from the commission merchants would not take the wheat, so it was sold at a net loss of about 6 cents under the original sale.

Nashville merchants bought four cars of corn on track and from samples at about the same time. This proved a good sale, and all the weights were correct.

The only advantage in track transactions that we can see is that the grade taken on side track here may prove more satisfactory than to take city inspection. We have sold 74 cars this season on the Nashville market, by Nashville grading and weighing, and with the exception of but a few cars the grain graded as we expected, and the weights were all right.

Yours truly,
S. E. & G. W. JOHNSON.
Cayce, Ky.

SELLS ON TRACK.

Editor American Elevator and Grain Trade:—I buy mostly on commission at my own weights, and, when I do sell, I sell on track, also, at my own weights. I take care to see that the car is perfectly tight before I ship and take a bill of lading for its entire contents or railroad weights, the car being weighed before loading. I think a great deal of the shortages complained of comes from carelessness in loading. As I sell altogether at my own weights, I never have any shortage.

By selling on track I get my money at the time of the sale, and so avoid all delay.

This place is only a flag station, but a good grain point. As I can buy only by car lots, half the grain that ought to come here goes five miles north or five miles south to an elevator. I have been handling grain for about 35 years, and I would gladly buy grain here for anyone who would build a small elevator. I could get about as much more grain and at 1 cent less than the elevators north and south of me. I have a new four-ton Standard Scale. I have also control of the railroad and express offices.

J. F. ENSEY.

Bonita, Kan.

SELLING ON TRACK THE SAFEST WAY.

Editor American Elevator and Grain Trade:—We have had quite an experience in the past five years in selling grain on track. During the last year we have not had any serious trouble, the returns being satisfactory as a rule.

The first four years of our business all our sales were made subject to Eastern weights, inspection and so many days' shipment, and we had bad returns; yes, some were disgusting.

One way that our "sure profit" disappeared was in our being unable to get cars in a limited time. When the market is higher than the prices maintaining at the time of our sale, at the expiration of the limited time given the track buyer will extend our time and compel us to fill the sale. But if the market ranges lower and our sale is not filled within the limited time the track buyer simply cancels our sale and we are compelled to take grain from our customer at the higher price for which it was contracted and sell at a lower price. This of course is unfair, but it is a habit the track buyer has, and he uses it frequently.

During the past year we have sold to Watkins & Co. of Sheldon, Ill., and E. P. Knight & Co. of Lafayette, Ind., and several Chicago track buyers, and

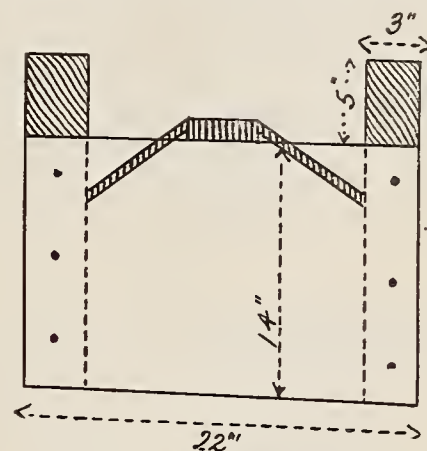
have been well pleased. We consign very little grain, as selling on track seems to us the safest.

Yours very truly,
O. A. MEANS & Co.
Anchor, Ill.

A CONVENIENT SACK HOLDER.

BY S. SACKER.

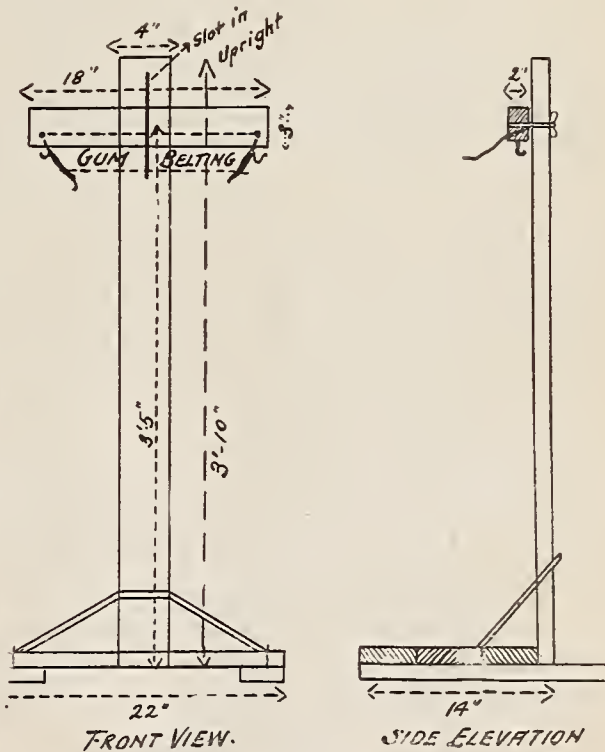
The accompanying illustrations represent a very convenient sack holder for use in the elevator. It is easily made, and when properly constructed is superior, as a sack holder, to a boy or man. The platform is 14 inches by 22 inches square, of any desirable thickness, with the cross cleats extending back behind to give it steadiness. The cleats should be on the under side of the platform. An upright 1x4 inches



TOP VIEW OF PLATFORM.

A CONVENIENT SACK HOLDER.

and 3 feet 10 inches high is nailed or fastened by screws to the back edge of the platform and braced with an iron strap or rod to the platform, as shown in the illustration. A crosshead 1½x3x18 inches long is attached to this upright by a bolt which passes through the slot in upright and is adjusted by thumb nut to any desired height. Two hooks 16 inches apart are attached to this cross piece, with points



A CONVENIENT SACK HOLDER.

turned back in order to hold the back side of the sack. The front side of the sack is held by short turned-out hooks on the ends of the arms, which are attached to the front of the cross piece by driving the ends about 5 or 5½ inches into the wood crosshead. These hooks should be placed so that their points will come 12 inches apart. A piece of gum belting is nailed to the front side of the crosshead so as to hang down inside of sack; this will prevent grain spilling over the back side of the sack when being filled. The piece of belting is indicated in the illustration by the dotted lines within the hook arms of the crosshead. The size of this sack holder is suitable for the ordinary 2-bushel grain sack.

Reports from Kansas show that very much wheat will be fed to stock this year.

I'M OUT—WHEAT 50.

BY MICHAEL JOSEPH DONNELLY.

Have you e'er had the sensation,
Have you felt a great temptation
To plunge in speculation with the market high or low?
If you haven't, pray be happy.
Here's a fellow, luckless chappie;
Said he didn't care a rap, he would take a flyer. So
One bright auspicious morning,
Every thought of danger scorning,
Heedless of all friendly warning, to a bucket shop he went;
And with mien of Richard Croker,
Or s me dashing "on 'Change" broker,
Gave May wheat a ruthless soaker, went it long with his last cent.

May was then a dollar seven,
Long heads said she'd climb to heaven,
Wise men thought she'd touch "two" even ere the corner lost its grip;
And I couldn't help agreeing
With these grave wisecracks, seeing
That they know their business, being that they spoke from a sure tip.
For a day the cereal boosted,
On high ground my hopelets roosted,
Till May wheat—a cold wave goosed it and she went careening down.
On the morrow I was saddened,
On the morrow I was maddened,
On the morrow wished I hadn't—poorest, meanest cuss in town.

In those days I thought me clever,
This was years ago, but never
Will I make a last endeavor to recoup myself on wheat.
I'll be satisfied with turning
To the time when I was yearning
For a million. Now I'm earning just enough—no more—to eat.
I was sick, but I'll be sicker
Ere I make another dicker.
Ere I test the fated ticker, for I know what I'm about.
No more wild, exciting flyer,
Of the cereals a buyer,
For a burned child dreads the fire, and you bet your life I'm out.



[We invite correspondence from everyone in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

WILL SHIP NO CORN FROM NEW ELEVATOR.

Editor American Elevator and Grain Trade:—I have been a reader of your valuable journal for just two years, but have not expressed my opinion of it heretofore. I am very much pleased with it, and have learned many things beneficial to my business. Long may it live and larger may it grow.

I had been making preparations to handle a large crop this year, and am sorry to report that we are in the midst of the great drouth district of this state. Not a bushel of corn will be harvested in this (Hamilton) county. My new elevator is complete, with the exception of a gasoline engine, which I do not intend to buy until another crop is in sight. The elevator was built by J. A. West of Fremont, Neb., and the machinery was supplied by the York Foundry and Engine Company of York, Neb.

Yours respectfully, W. A. TARBELL.
Markett, Neb.

THE TOLEDO PNEUMATIC ELEVATOR.

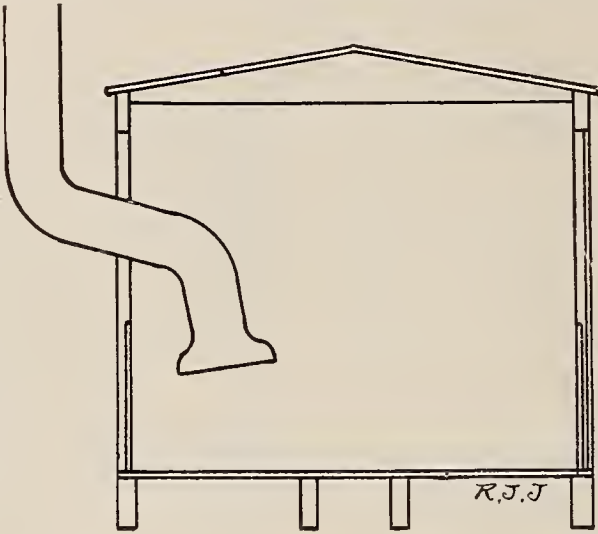
Editor American Elevator and Grain Trade:—A thousand obstacles stand in the way of every innovation. In every new system, however carefully inaugurated, unforeseen difficulties will arise and must be overcome. The Iron Elevator at Toledo, Ohio, of which Coon & Churchill are owners, with its pneumatic transfer and steel storage tanks, has successfully overcome the impediments to its progress, and I am confident it will make a great success of its elevator. The company is deluged with business and satisfactorily handling it.

It took a couple of weeks for the new plant to get limbered up, but nevertheless 40 bushels per minute were easily elevated at the start, and a still greater success will meet the efforts of the operators. In a

recent test of the elevating capacity of the new system 500 bushels of grain were elevated from the storage tanks in 5 minutes.

One of the difficulties to be overcome in elevating grain from a car is the manner in which the receiving pipe enters the car through the door. This is illustrated in the sketch I send. As the receiving pipe enters at the side of the car it makes two bends or elbows, which interferes with the flow of the grain. In elevating grain from the tanks the pipe has no bend and the flow of grain is unimpeded: it's a straight shoot and up she comes.

This difficulty with the grain cars would be overcome if there were a hole in the roof of sufficient size to admit the "sucker" and a thousand bushels could then be elevated in 9 minutes. The owners possess the two virtues of nerve and knowledge; they attracted the attention of the elevator and grain trade of the country by their enterprise, and their success



THE TOLEDO PNEUMATIC ELEVATOR.

is well deserved. I am somewhat surprised that Chicago with her many enterprising citizens was not first to adopt this system.

Yours truly, BUCKEYE.

WHAT SHIPPERS CAN AFFORD TO PAY WHEN HAY IS \$15. PER TON IN NEW YORK.

Editor American Elevator and Grain Trade:—We have compiled the following table for the guidance of shippers of hay. It shows what they can afford to pay for strictly No. 1 hay on a basis of \$15 per ton selling price here with the freight rates from certain points:

Freight per T.	Shipper's pft.	Commission.	Pressing.	Cost of Hay.	Selling Price.
\$1 60	\$1 00	\$1 00	\$1 50	\$9 90	\$15 00
1 80	1 00	1 00	1 50	9 70	15 00
2 40	1 00	1 00	1 50	9 10	15 00
2 60	1 00	1 00	1 50	8 90	15 00
2 80	1 00	1 00	1 50	8 70	15 00
3 00	1 00	1 00	1 50	8 50	15 00
3 20	1 00	1 00	1 50	8 30	15 00
3 40	1 00	1 00	1 50	8 10	15 00
3 60	1 00	1 00	1 50	7 90	15 00
3 80	1 00	1 00	1 50	7 70	15 00
4 00	1 00	1 00	1 50	7 50	15 00
4 20	1 00	1 00	1 50	7 30	15 00
4 40	1 00	1 00	1 50	7 10	15 00
4 60	1 00	1 00	1 50	6 90	15 00
4 80	1 00	1 00	1 50	6 70	15 00
5 00	1 00	1 00	1 50	6 50	15 00

We have taken as expenses the cost of pressing, commission and the profits the shipper may expect, \$1 per ton.

If the rules for grading are strictly adhered to we believe that this table will be a valuable guide. It shows conclusively that the shipper whose rate to a receiving point is 23 cents per hundredweight cannot afford to pay over \$6.90 for strictly No. 1 hay, while the shipper whose rate is only 13 cents can pay \$8.90.

Grading should not be uncertain to insure a profit. There are sections of the country that do not produce hay better than No. 2, the best that is raised being called No. 1 or even Prime. The rules for grading No. 1 and 2 hay as established and adopted by the New York Produce Exchange are as follows: No. 1 hay shall be timothy, not more than one-quarter mixed with other tame grasses properly cured, bright

color, sweet, sound and well baled. No. 2 hay should include all timothy not good enough for No. 1, proportionally mixed with other tame grasses, sweet, sound and well baled.

THEO. P. HUFFMAN & Co.

New York City.

OUR BOSTON LETTER.

Editor American Elevator and Grain Trade:—The market has been featureless during the past month with the exception that a large quantity of milling wheat has been sold. The price of wheat has been below that of corn, and as a consequence large quantities have been sold to country millers, who are grinding half wheat and half corn, making a valuable meal for feeding purposes.

Our receipts here and at junction points have been heavy. At one time the N. Y., N. H. and H. R. R. R. people reported that they were holding 800 cars of grain at Harlem River, N. Y., awaiting orders.

Receipts and exports for the month of August, 1894, as compared with those of the same time in the preceding year, were as follows:

RECEIPTS FOR AUGUST.

Articles.	1894.	1893.
Cotton Seed meal, tons.....	694	742
Corn, bushels.....	236,305	448,972
Wheat, bushels.....	378,484	656,199
Oats, bushels.....	789,797	603,315
Rye, bushels.....	2,330	2,170
Mill Feed, tons.....	2,663	3,325
Oatmeal, sacks.....	1,650	1,271
Oatmeal, barrels.....	1,505	1,910
Cornmeal, barrels.....	1,610	9,648
Malt, bushels.....	116,925	118,625
Barley, bushels.....	2,525	7,385
Hops, bales.....	340	673
Peas, bushels.....	1,698	.....
Buckwheat, bushels.....	.....	.....
Flour, barrels.....	128,973	95,928
Flour, sacks.....	304,325	248,250
Hay, cars.....	737	617
Straw, cars.....	238	273

EXPORTS FOR AUGUST.

Articles.	1894.	1893.
Wheat, bushels.....	582,839	728,326
Corn, bushels.....	134,245	492,920
Oats, bushels.....	2,201	.....
Peas, bushels.....	.....	.....
Barley, bushels.....	.....	.....
Buckwheat, bushels.....	680	3,713
Cornmeal, barrels.....	.....	.....
Oatmeal, barrels.....	672	255
Oatmeal, sacks.....	400	1,355
Flour, sacks.....	267,597	266,638
Flour, barrels.....	35,767	29,250
Mill Feed, bags.....	6,550	3,502
Hay, bales.....	56,396	89,241
Straw, bales.....	.....	.....

Clapham Bros. have withdrawn from the management of the Boston office of the Pillsbury-Washburn Company.

The firm of Crockett Bros. & Sanborn was dissolved September 1. J. Walter Sanborn, member of the firm, and F. F. Favor, who has been associated with them for eight years, have formed a co-partnership under the firm name of Sanborn, Favor & Co., to continue the business of the old firm.

BUNKER HILL.

ELEVATOR MEN IN THE HAY BUSINESS.

Editor American Elevator and Grain Trade:—I wish to call the attention of your readers to the recent enterprise of the Saginaw Milling Company at Saginaw, Mich., and mention a few facts. This company has recently purchased a power baling press, constructed a building expressly for the purpose, and will purchase, bale and ship all the hay in that market. That they will do a successful business in this line I do not doubt.

It seems to me that the province of buying, storing and shipping hay is quite as much in the line of business of the elevator man as the shipping of grain. Nearly every elevator owner has power, labor and space to spare; also the necessary capital, and could, with little expense, purchase the baling press and erect the necessary buildings for carrying on this branch of business. The enterprise would be greatly appreciated by farmers, who are generally unable through lack of baling facilities to dispose of their surplus hay. If they were certain of a local market for hay there would be much more grown and more

attention would be paid to raising the best varieties. The best grades are always in demand and usually command a good price.

I have been engaged in purchasing hay for over a year in connection with buying and shipping grain, and found the profits of the business a very satisfactory item when I closed my invoice of last year's business. The time which I found necessary to devote to this venture proved just as profitable as that which I spent in my other interests. I expect to do better this season than last, as my experience of last year will be of advantage to me, and I expect a larger and better crop will be marketed, as the farmers have learned that they will always have a market. I think the elevator owners throughout the country should recognize the fact that the large hay crops of the country are demanding a more convenient route to the central markets than they have heretofore enjoyed, and if the elevator men are not alive to their interests in this respect, the business will fall into the hands of others.

Very truly, AN ELEVATOR OWNER.

DETECTING TRANSPOSITIONS IN ELEVATOR ACCOUNTS.

Editor American Elevator and Grain Trade:—As the chevalier Don said of a worthier subject than unbending figures, Mr. G. B. Carter's method of "Detecting Transpositions in Elevator Accounts" cannot be too much praised, however excessively. As it has been granted that anyone seeing a defect or flaw in the system could have the use of the columns of the AMERICAN ELEVATOR AND GRAIN TRADE I timidly venture a few remarks.

Undoubtedly it is a very easy matter to transpose figures when copying them, but it seems to me that Mr. Carter's system, so far from assisting in the detection of such errors, is liable to become, at times, very misleading. Perhaps Mr. Carter would not believe it. Let him take the example given in the article referred to, viz., 878:04. It is true that in transferring these figures from one account to another they are very liable to be transposed. We are assured that this transposition did occur in an amount of oats. Applying Mr. Carter's method we use 8 as a multiplier, and by "multiplying 7, the first figure on the right in the bushels column of the number 887:04, which is the amount recorded, by 8, we get 56. Now 6, the last figure of the product, is not the figure on the right in the pounds column, so we take the second figure in the bushels column as a multiplicand and get 64 for a product. The first figure on the right of the product is the same as the first figure on the right in the pounds column, so we can rest assured that 7 and 8 were transposed. If the amount had been recorded 878:40 the transposition could have been detected just as easily."

This sounds very plausible, but it is a poor rule that will not work both ways. We will suppose that the original and proper entry was 887:04, and that in copying the weight the figures were transposed so as to read 878:04. It will be granted that this is quite as probable an error as the one previously disposed of so easily. We apply Mr. Carter's method to save time and trouble—and I defy him or anyone else, by means of that method, to find the transposition there effected.

If in the example before quoted, viz., writing 887:04 for 878:04, we can by the operation of Mr. Carter's system "rest assured that 7 and 8 were transposed," must we not in this second instance—where 887:04 is written 878:04—rest assured that the latter amount, 878:04, is the correct one, since it conforms to the rule? For, taking 8 as the proper multiplier for oats we multiply the first figure on the right in the bushels column of the number 878:04 and obtain 64 as a product; and since the first figure on the right of this product is the same as the first figure on the right in the pounds column, we certainly should, if we relied on Mr. Carter's proof, pass 878:04 as being perfectly correct, whereas there exists a discrepancy of nine bushels between it and the proper entry, which was 887:04.

This is such a palpable shortcoming that surely anyone but a mathematician would have seen it. If any further evidence is needed to show how utterly valueless and unreliable is this method it is only nec-

essary to call attention to the weights of grain in the accompanying table:

Corn 4.	Rye 4.	Oats 8.	Barley 2.
232:02	493:36	1,189:20	602:36
222:52	509:20	2,240:28	540:42
537:32	630:24	1,182:04	774:20
92:42	996:28	911:16	696:34
4,754:30	492:12	1,527:04	773:28
1,661:38	595:14	1,194:30	797:46
2,333:46	2,128:16	896:06	818:38
992:42	891:08	877:04	595:22
3,761:40	974:20	956:06	694:30
841:08	797:12	1,003:12	816:24

Here in every instance those highly "mysterious" multipliers, 4, 4, 8, 2, would not only prove powerless to operate upon these figures, but if used in the vain hope of discovering errors in transposition would only serve to render "confusion worse confounded."

Respectfully, J. G. GREEN.
Buffalo, N. Y.

BARLEY IN WISCONSIN.

T. J. Cunningham, secretary of the state of Wisconsin, kindly furnishes the AMERICAN ELEVATOR AND GRAIN TRADE with the following tabulated statement of the amount of barley grown in Wisconsin in 1893, by counties.

Adams.....	1,156	Marathon.....	20,032
Ashland.....	152	Marquette.....	1,592
Barron.....	3,750	Marquette.....	755
Bayfield.....	100	Milwaukee.....	128,029
Brown.....	42,626	Monroe.....	81,471
Buffalo.....	100,000	Oconto.....	3,187
Burnett.....	119	Oneida.....	None
Calumet.....	448,302	Outagamie.....	100,214
Chippewa.....	30,103	Ozaukee.....	343,457
Clark.....	4,915	Pepin.....	65,038
Columbia.....	360,287	Pierce.....	282,194
Crawford.....	8,452	Polk.....	18,418
Dane.....	352,439	Portage.....	2,688
Dodge.....	1,795,907	Price.....	70
Door.....	11,648	Racine.....	63,819
Douglas.....	None	Richland.....	2,404
Dunn.....	27,507	Rock.....	318,269
Eau Claire.....	46,618	St. Croix.....	79,131
Florence.....	None	Sauk.....	7,789
Fond du Lac.....	1,237,402	Sawyer.....	None
Forest.....	10	Shawano.....	13,098
Grant.....	8,764	Sheboygan.....	682,398
Green.....	10,593	Taylor.....	374
Green Lake.....	178,841	Trempealeau.....	31,713
Iowa.....	4,488	Vernon.....	65,148
Iron.....	None	Vilas.....	None
Jackson.....	12,756	Walworth.....	383,265
Jefferson.....	348,072	Washington.....	None
Juneau.....	5,709	Waukesha.....	497,388
Kenosha.....	34,383	Waupaca.....	10,061
Kewaunee.....	47,561	Wausara.....	1,097
LaCrosse.....	75,470	Winnebago.....	160,973
LaFayette.....	4,465	Wood.....	3,423
Langlade.....	1,941		
Lincoln.....	890		
Manitowoc.....	238,729	Total.....	9,496,792

A SEASON'S BUSINESS OF AN ELEVATOR BUILDING FIRM.

Following is a list of the elevators built by Hons-tain Bros. of Minneapolis, Minn., during the season of 1894. It sustains the prediction we made months ago that this was to be a lively season for elevator building:

	Bushels.
Minneapolis, Minn., Monarch Elevator Co.....	1,000,000
La Moure, N. D., Monarch Elevator Co.....	20,000
Cashell, N. D., Monarch Elevator Co.....	20,000
Westport, Minn., Monarch Elevator Co.....	20,000
Woods, N. D., Monarch Elevator Co.....	2,000
Laurel, Neb., Peavey Elevator Co.....	20,000
Emerson, Neb., Peavey Elevator Co.....	20,000
Carroll, Neb., Peavey Elevator Co.....	20,000
Slayton, Minn., Peavey Elevator Co.....	20,000
Hosper, Iowa, Peavey Elevator Co.....	20,000
Revere, Minn., Bingham Bros.....	15,000
Revere, Minn., Parsons Bros.....	15,000
Lamberton, Minn., Parsons Bros.....	15,000
Anfret, Minn., Bingham Bros.....	10,000
Baker, Minn., Minnesota & Western Grain Co.....	15,000
Cannon Falls, Minn., Cannon Falls Elevator Co.....	20,000
Monticello, Minn., Minnesota & Dakota Elevator Co.....	20,000
Cashell, N. D., Victoria Elevator Co.....	15,000
Norway Spur, N. D., Osborne & McMillen.....	20,000
Langdon, N. D., Robert Fleming.....	30,000
Wausa, Neb., Turner & Brenner.....	10,000
Carroll, Neb., Turner & Brenner.....	10,000
Dazey, N. D., Monarch Elevator Co.....	20,000
White Rock, S. D., C. A. Smith & Co.....	20,000

"About the only thing to be said about the hay crop in Minnesota," says the Minneapolis Tribune, "is that there is none, that is, comparing it with previous years. The drouth has effectually destroyed the crop in certain portions of the state, while in others the hay is coarse and weedy. Commission merchants predict that in consequence of this unusual state of affairs there will be a hay famine later in the year.

DOTS AND DASHES.

The south wind gave King Corn a shake,
Saying: "Old Nubbins, how d'e do?"
The once proud ruler bowed his head
And creaked, "I'm sick'n tired of you!
Go 'way!"

An old speculator remarked the other day that every young man had a great many valuable options that never cost him a cent.

Kansas farmers are feeding wheat to their hogs, something that never happened before, it is said, is the history of the state.

Local grain buyers at London, Ohio, are reveling in anomalies. They are paying 50 cents for corn, 47 cents for wheat and 30 cents for oats.

A carload of wheat shipped from Grafton, N. D., to Duluth brought \$605, and out of that \$103 went for freight. This is too much like a "Hands-up!" deal.

The Chicago Grain Trimmers' Union has advanced the union rate for trimming cargoes to \$1 per 1,000 bushels. Hitherto this season the rate has ranged all the way from 60 cents to \$1.

Barley malt aggregating 3,784 bushels, valued at \$4,169, was imported during the seven months ending with July, against 1,585 bushels, valued at \$1,932, imported during the corresponding months of the year preceding.

Eight horses belonging to a farmer at Tower Hill, Ill., died from the effects of eating new wheat one day recently. It seems that sauce is not for the gander in this direction, and care should be taken in feeding wheat.

Mr. Ebb Watson wanted to find out what holy writ knew about the modest little mustard seed and planted some in his neighbor's wheat field. He will have a two months' opportunity for study, if not experiment, in a Minnesota jail.

The Santa Fe Railroad proposes to furnish Kansas farmers with seed wheat under the condition that they shall replace it, bushel for bushel, if they raise any next year. This is a new way to store wheat, and quite a speculation, too.

A prominent North Dakota farmer says that the proper use for wheat is not to thresh it at all, but to feed it from the bundle to sheep and hogs, and that wheat worth 30 cents a bushel in the shock is not worth over the bran that is left after being made into flour.

A correspondent of an Albany grain firm reports as a result of an experimental feeding of wheat to hogs now in process of fattening for delivery by September 15, a gain in weight equivalent at the market price of hogs to \$1.38 per bushel for the wheat consumed by the animals.

Broom corn valued at \$3,357 was exported during July, against an amount valued at \$14,217 exported in July, 1893, and during the seven months ending with July, broom corn valued at \$86,022 was exported, against an amount valued at \$98,916 exported during the corresponding months ending with July, 1893.

LAST HOPE OF THE BULLS.



"One hog is worth a dozen foreigners for eating wheat."—From J. F. Zahm & Co.'s Circular.

THE LAKE SHORE & MICHIGAN SOUTHERN RY. CO.'S ELE- VATOR SYSTEM.

NO. III.

BY J. A. DEMUTH.

TERMINAL HOUSES.

It often happens that measures conceived and established in a spirit of fairness and mutual interests are by reason of unforeseen influences diverted from their original purposes and made to serve primarily interests which are unfair and selfish. It seems to me that this thing has happened to the system under discussion. This system of elevators was projected for the advantage of the L. S. & M. S. Ry. Company and the grain producers along its lines. The original plan embodied the mutually advantageous scheme of perfect shipping facilities for the farmer or grain buyer and assured traffic for the company.

The "unforeseen influence" which eventually put in an appearance was, as has been stated, the exceptionally fine grades which were the result of adhering strictly to high standards. Another "unforeseen influence," and one which followed naturally in the train of the former, was the conflict of rates which the company was obliged to enter in order to secure the Eastern haul on grain from its own warehouses. If the company could have hauled its elevator receipts by Toledo at its own rates, based on the short haul from its grain stations to Toledo, it would have been no grievous matter, as the grain in that case would have been free from the competition of lake rates from Toledo. But at many of the grain stations the farmers and buyers could avail themselves of competing roads, so that much of the grain which naturally found outlet through the company's grain houses was hauled to competing roads. By these and other various influences it has come to pass that the company has leased many of its grain houses to private parties, including elevator "B" at Toledo.

Elevators "A" and "B," the erstwhile terminal elevators of this erstwhile Utopian system, have a capacity of 350,000 bushels each. They are not modern in construction, having a clumsy system of spouting and until recently unloading grain by hand shovels. The weighing in is done on track scales, the weighing out (via lake) through hopper scales of 100-bushel drafts. Formerly the inspecting was done by the company and its choice grade of red wheat was known as No. 1 Amber. For the past dozen years or more the inspection has been done under supervision of the Board of Trade (Produce Exchange). Its grades are still standard for the reason, I presume, that there are no cleaning facilities and consequently no alternative for a slightly dirty car of No. 2 Red but to be dumped into No. 3 bins. This process makes excellent No. 3 and also exceptionally fine No. 2. But it is discouraging for the shipper.

At one time in the history of these houses Lake Shore No. 2 Soft sold at a premium of from 2 to 6 cents per bushel. Then it was that scheming was rife. In those days we received a great deal of grain from connecting roads on memorandum waybills—a wonderfully loose way of doing business. For example, shippers of grain over the Canada Southern, or Toledo & Ann Arbor, or the C. H. V. & T. would have their grain billed "care of L. S. Elevators." The charges on this grain were collected by the roads over which the grain was shipped, our company collecting switching and elevating charges only and delivering elevator receipts on payment of our charges and an order from the other road. In this way we were in the dark (for a long time) as to the original point of shipment. The grain of course was always up to our standard and was "Lake Shore" after it had been taken in.

One day our superintendent in his customary inspecting tours through our yard had his attention called to a car loaded with wheat and which had just been "set in" from the Canada Southern road. The car was regularly chalked from some station on the C. S. road, but it so happened that this identical car had by some circumstance been spotted while crossing our tracks in the morning on this same day on its way from the ——— elevators to the C. S. road. This was an eye opener and led to the discovery that grain had been regularly imported from our neighboring eleva-

tors to be taken in as regular shipments from other roads—the wise owner willingly paying \$3 per car for switching and \$2.50 for elevating; all for a little premium of from \$20 to \$30 per car!

It is needless to say there was a change and again our fancy grades proved to be an "influence," the result of which eventually placed our inspection on all grain except that coming from our regular grain houses in the hands of the inspection committee of the Produce Exchange. The premium on Lake Shore wheat was not, however, entirely dispelled by this change, as the millers who bought wheat for immediate use were willing to pay several points more for our wheat because they knew they could depend on its quality every day in the week.

I never could understand why our officials persisted in their refusal to put in cleaning facilities unless it was that they wished to preserve a sort of yea and nay simplicity in the operation of their plant.

The real authorities were located in Cleveland at that time and had but a general knowledge of the practical working of the elevators. The accounts were under the supervision of the freight department, and many were the cases of friction between theoretical authorities and the practical hirelings who did the work. Our agents at the various grain houses on the road went with their grievances to Cleveland.

One of these grievances a number of years ago found its way into very black and conspicuous headlines in the daily and weekly newspapers the country over. An admission by one of our agents at a small station on the Western division, which first found publicity in the columns of a village paper, grew from a small blaze to an alarming conflagration in an incredibly short time. The agent's "admission" was that he had been in the habit of systematically stealing from farmers in weighing in grain in order to keep his house whole against the stealing which was practised by the Toledo elevators. Also his long surpluses at the "cleaning out" of his house was the subject of special commendation by the traveling auditor. This stirred up the farmers and newspapers and everybody who had a grudge against the company. In the Chicago papers it was a case of "unearthing;" and the days of the company's officials were all but numbered.

Now here are the instructions to agents in regard to weighing in grain:

"Grain will be received into grain houses of this company for shipment only; and as more or less waste and shrinkage will occur in its handling and transportation, a reasonable allowance should be made for this in weighing into grain houses, and to prevent any misunderstanding as to amount received, the party delivering the grain should be informed of the excess taken and reason therefor. If the actual weight terminates in a cipher or five, use the actual weight. If it does not terminate in a cipher or five use the next lower cipher or five as the receiving weight. For example:

Actual weight	3,770	pounds	call it	3,770	pounds.
"	3,775	"	"	3,775	"
"	3,774	"	"	3,770	"
"	3,778	"	"	3,775	"

Do not allow more than five pounds to a draft of from 2,000 to 4,000 pounds. Use the utmost care to avoid errors in weighing."

There are no "private instructions" about this matter so far as the company is concerned, as the agent is specially directed to acquaint everybody concerned with the instructions and the reasons thereof. It is true this particular agent's cars were *always* short at Toledo elevators. This he charged to the Toledo elevators, but a little bit of reasoning which was the result of "will you please explain" correspondence from Cleveland put our agent into a hole which he himself had dugged. A statement was submitted showing his surpluses for a number of years, and for comparison, a statement for the same years of the surpluses from a neighboring station whose weights were uniformly close with Toledo's. And appended thereto was this query: If Toledo weights cause a shortage of from 100 to 300 pounds on every car from C——'s station, how does it happen that C——'s surpluses are about two-thirds larger than D——'s whose weights are uniformly correct at Toledo? We never received an answer to this problem. Perhaps it was C——'s turn to "please explain." The furore which this small station raised was quite remarkable and for a time the Toledo eleva-

tors were, I presume, under a cloud to those whose newspaper knowledge of this affair constituted their acquaintance with our methods.

However, this scandal found little credence with those who had reason to believe in the honesty of our grades and the stubborn adherence of our agent to his duty in denying himself tempting profits by participating in little schemes by which "the company wouldn't lose a cent."

My services as grain clerk in the employ of this company covered a period of nearly eighteen years. When I came to resign my place I was conscious of no attachment to "the company" for the reason, I suppose, that its policy makes "the company" an intangible thing to the great body of its employees. I may therefore be fairly considered unbiased and impartial when I say that my knowledge of this company's elevator business warrants me in declaring that they have always aimed to deal honestly and fairly with farmers, shippers, and all others with whom their elevator system has brought them into business relations.

I have no love for the company. But I should be unfair if I withheld a statement of my knowledge and belief that they always deprecated surpluses and tried in various ways to reduce them. Many of the grain houses were nearly always short and I have no doubt that many of them were over through a justifiable fear of coming out short.

Those who contend that it is not necessary to have a surplus simply acknowledge their inexperience in the practical running of an elevator. An elevator *will* be either over or short, and employees who realize this fact will nearly always be influenced by it in their weighing. The following is a list of this company's grain houses:

STATION.	CAPACITY.	STATION.	CAPACITY.
Blissfield	8,890	Constantine	17,700
Adrian	35,670	Moorepark	5,330
Clayton	8,620	Flowerfield	4,210
Hudson	13,440	Klinger Lake	7,030
Pittsford	5,370	White Pigeon	8,370
Jonesville	17,900	Vistula	7,180
Allens	7,770	Bristol	17,300
Quincy	7,660	Warren	6,970
Coldwater	16,700	Terre Coupee	6,290
Bronson	Burned	New Carlisle	7,340
Burr Oak	14,050	Rolling Prairie	8,460
Sturgis	15,110	La Porte	41,200
Toledo "A"	350,000	La Porte	44,620
Toledo "B"	350,000	Durham	8,900
Tecumseh	7,500	Chesterton	15,100
Clinton	13,100	Pittsfield *	
Manchester	16,650	Saline *	
Nepoleon	7,600	Bridgewater *	
Jackson	12,000	Brooklyn *	
Delta	6,650	Somerset Center *	
Archibald	5,260	Jerome *	
Stryker	16,900	N. Adams *	
Bryan	8,520	Bankers *	
Edgerton	8,990	Horton *	
Butler	10,420	Hanover	6,440
Waterloo	11,250	Mosherville	5,220
Corunna	11,470	Reading	6,180
Kendallville	20,230	Montgomery	7,250
Brimfield	8,890	Ray *	
Wawaka	3,550	Fremont	10,080
Ligonier	26,240	Angola	10,280
Ligonier	21,850	Pleasant Lake	7,860
Millersburg	6,430	Summit	3,900
Goshen	23,740	Auburn *	
Eaton Rapids	9,870	Homen	7,620
Dimondale	5,880	Albion	13,670
Lansing	11,400	Springport	6,800
North Lansing	7,870		

* Leased to private parties.

The house at Goshen, Ind., has been closed the past year, the large mills at Ligonier taking all the grain heretofore shipped through the company's warehouse. The house at Jackson, Mich., has also been closed for the past two or three years, all bulk grain going east via Michigan Central from this point.

The receipts at Hillsdale, Coldwater, Jonesville, Litchfield, Elkhart and Ligonier are about one-third of what they were formerly, the grain being used by mills at these points which were not in operation when these houses were built.

An illustration of the value of the system of daily reports of receipts and shipments from these houses to the general grain office in Cleveland is had by the fact that adjustment of all losses and insurance by the fire at Bronson Station where all records were burned was made from the books and reports in the Cleveland office. This system is in the main the invention of Mr. Ed. Couch, the head clerk of the general grain office in Cleveland, who justly takes great pride in the efficiency of his method.

Kansas is threatened with a slump in husking gloves.

Queries and Replies.

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.

No. 4. Amount of Barley Raised in Three Barley States.—Can some reader of the AMERICAN ELEVATOR AND GRAIN TRADE state the amount of barley raised in each county of the three large barley states, Wisconsin, Minnesota and Iowa, in 1893?—A SUBSCRIBER.

THE VICTOR BARLEY TESTER.

As its name indicates, this little machine is intended for cleaning samples of barley, and is of especial value for the shipper or buyer of barley. A small mail sample of barley can be put through the machine, scoured and separated. The offal, oats, etc., can then be weighed, and the clean grain inspected, this showing with certainty the exact value or quality of the grain tested. The experienced barley man need not be told more than this. The machine does all that we claim for it. It is small, takes very little room, is almost noiseless, and is dustless. It is made strong and durable. The several parts are but miniatures of the larger machines used for cleaning barley. The operation, being the same, gives the same results. This is where the especial value of the machine comes in, as by its use you can buy, mix or sell with certainty as to value or results. Its length is 5' 5"; width 1' 7"; height 4'. It is made by the Barnard & Leas Manufacturing Company, Moline, Ill., who will be pleased to quote prices and furnish further information.

THE SYSTEM OF GRAIN INSPECTION; ITS ESTABLISHMENT AND GROWTH.

NO. VII.

When the department of grain inspection at Chicago passed from the control of the Board of Trade into that of the state the progress of the department, under the new condition of affairs, was watched with great interest by other cities which had large grain interests. The merchants of several of them made a study of the Chicago system, and as a result there is great similarity in the manner of conducting the work of inspection in all the large cities where an inspection department exists.

The department of grain inspection in New York City was established by the New York Produce Exchange Dec. 7, 1875. The grain committee adopted the necessary rules and regulations and appointed inspectors to inspect and grade all grain arriving at the terminus of the various railroads which had entered into the agreement with the Exchange to handle graded grain. A. D. Stirling was appointed inspector-in-chief. Deputy inspectors, inspectors of weights, a chief clerk and collector were also appointed.

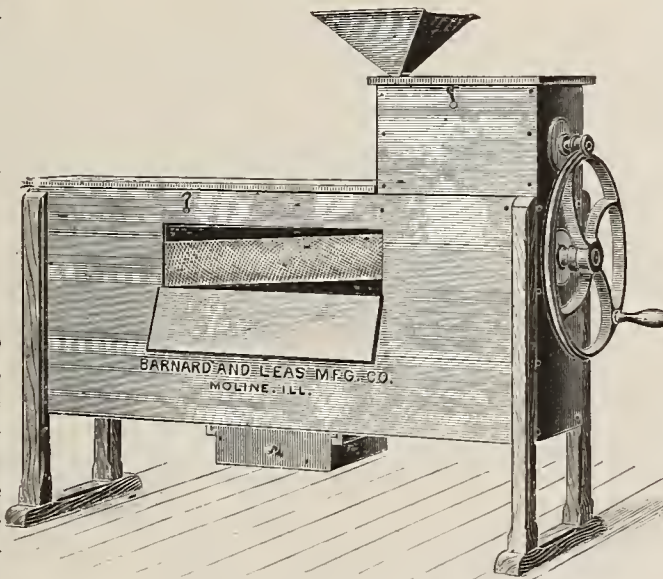
The department is conducted under the fee system, and for the first five years the inspector-in-chief received all fees and paid salaries and all other expenses. About January, 1880, the board of managers decided to put the inspector-in-chief on a salary and to pay all expenses, depositing the fees into a fund created for that purpose known as the grain inspection fund. The department has been self-sustaining ever since, and has to-day a very nice surplus to its credit.

Upon its arrival at the New York terminus of the various roads, in the graded grain system, the grain is inspected in the yards of the roads by a force of men. Since the inspection department first started the number of railroads in the system has increased from three to eight. They are the New York Central & Hudson River Railroad, New York, Lake Erie and Western Railroad, Pennsylvania Railroad, West Shore Railroad, Delaware, Lackawanna & Western Railroad, Lehigh Valley Railroad, New York, Ontario & Western Railroad, and Baltimore & Ohio Railroad.

There are from three to eight men stationed in the yard of each road, an inspector or deputy, helper, return clerk and inspector of weights. The inspector receives his slips or tissues of the cars to be graded from the railroad company. The return clerk first

copies the car numbers and the names of the consignees from the railroad slips into what is called the inspection book. He gets this ready for the inspector, who starts out in the railroad yard in search for the cars as per numbers in his book. When the inspector finds a car whose number corresponds with that in his book the car opener, a man detailed for that service, breaks open the seals. The helper then climbs into the car and draws samples with a trier from different parts of the car and submits them to the inspector. The inspector passes his judgment on the grain, writes the grade in his book and also writes out a small ticket with the car number, grade, and all other information pertaining to it. This is tacked on the car as a guide for the railroad to unload by. After the inspector is through grading he takes his book to the return clerk, who copies the grades from the inspection book and fills out the stubs of his return or certificate books. The helper then takes the books and samples of grades to the office in New York, to be passed on by the inspector-in-chief, G. H. K. White.

The weighers' duty is to verify the weights. The railroad and elevator men have each a weigher. All three record the weight, which must agree. When the cars are weighed the weight of each car is entered on weight slips used especially for weighing. This is given to the return clerk, who also verifies as to the correctness of weight and fills in the number of bushels on the returns or certificates. When these returns are ready the department surrenders them to the rail-



THE VICTOR BARLEY TESTER.

road company. They then make out their certificates from the returns which are attached to the railroad certificates and both are delivered to the consignors. The weight slips are sent to the office and filed away for future reference.

This plan is carried out the same at all the roads. There are also warehouse and ship inspectors to inspect all grain going into store or out of store on the grade, or inspecting aboard steamships. There are ten deputies. When a firm desires to have a cargo of grain inspected a certain grade it lodges an order in the inspection office. A copy of this order is given to the inspector who may happen to be on that district, wherever the vessel may be stationed. When the ship is ready to take the grain the inspector, if the requirements come up to the grade, will pass on it and issue a certificate to the inspector which is placed on file. At the request of the shipper an export certificate for the grade is issued.

The inspector saves a fair sized sample of the shipment which he sends to the office; at the office three samples are made of the original sample and placed in separate packages. One is placed in a linen bag, stamped, tied and sealed. One is placed in a box which is tied and labeled. Both of these samples accompany the certificate which goes to the exporter. A sample is also preserved in the office, labeled and tied in a paper manilla bag. This is kept for 90 days for any future reference.

The warehouse inspectors are stationed at the different stores and elevators to inspect all grain going in on the grade or coming out, as the case may be, to see that every lot is up to the grade the owner is entitled to. When the grain is going into or out of store the inspector issues inspection returns, original or dupli-

cate. These are given to the warehouse company and one copy is also issued for the inspector's office.

The warehouse registrar, who is connected with the department, keeps account, based upon the inspector's reports, of all grain going into or out of store or railroad elevators. The records are so arranged that the exact amount of any kind or grade of grain in any warehouse can be ascertained at any time. No warehouse in the graded system can lawfully deliver any grain from its stores until the receipts representing it have been canceled by the registrar. In the inspection office in the Produce Exchange building a force of clerks is kept busy transcribing the reports of the different roads and stores into the office records. They compile the table of statistics from which the monthly and yearly reports are made and issue export railroad and boat certificates and all other duties pertaining to the inspection of grain.

The inspection fees are as follows: For inspection and verification of track weights, 40 cents per car; for inspection of boatloads of canal grain, \$3 each; for inspection into regular warehouses, 40 cents per 1,000 bushels; for inspection out of regular warehouses, 40 cents per 1,000 bushels; for out inspection and superintending at place of delivery of grain afloat (when requested), 40 cents per 1,000 bushels.

The executive staff of the grain inspection department is composed of G. H. K. White, inspector-in-chief; S. F. Quimby, warehouse registrar; C. C. H. Leopold, chief clerk, and Wm. H. Conklin, chief deputy. Mr. White entered the inspection department as a deputy inspector in 1882. He served in this capacity until the death of Inspector-in-Chief A. D. Sterling in April, 1888, when he was appointed to the position of inspector-in-chief by the grain committee and confirmed by the board of managers. His annual re-election by the grain committee of the Produce Exchange attests the confidence which the members of the Exchange repose in his ability.

The following tables show the volume of business which has been transacted by the inspection department for the past 13 years:

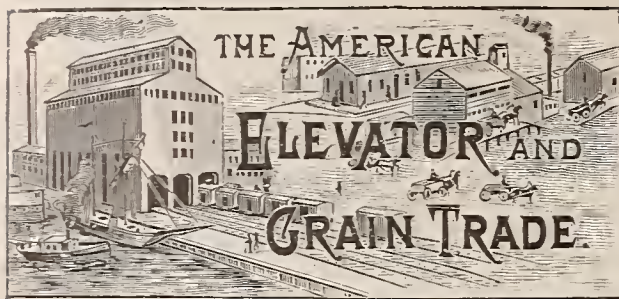
Inspected on arrival.	Cars.	Inspected boat loads of canal grain.
Season of 1880-81.....	92,876	3,283
" 1881-82.....	69,813	2,115
" 1882-83.....	90,975	1,626
" 1883-84.....	56,572	1,961
" 1884-85.....	74,907	1,391
" 1885-86.....	71,985	686
" 1886-87.....	69,611	985
" 1887-88.....	43,602	392
" 1888-89.....	51,252	341
" 1889-90.....	61,721	228
" 1890-91.....	49,159	217
" 1891-92.....	121,439	152
" 1892-93.....	76,200	102
Total.....	930,112	13,479

Inspected into and out of store.	Bushels.	Inspected into vessels.
Season of 1880-81.....	42,102,810	1,696,560
" 1881-82.....	6,161,540	21,409,102
" 1882-83.....	16,820,766	16,234,450
" 1883-84.....	28,656,734	24,474,129
" 1884-85.....	20,086,025	22,644,348
" 1885-86.....	17,985,514	27,332,311
" 1886-87.....	21,925,146	21,098,538
" 1887-88.....	30,621,046	15,589,547
" 1888-89.....	19,733,947	24,691,635
" 1889-90.....	19,045,011	17,031,151
" 1890-91.....	12,325,986	51,957,943
" 1891-92.....	13,673,058	34,006,768
" 1892-93.....	21,612,456	
Total bushels.....	228,647,229	320,269,892

In the number of cars of grain inspected on arrival the table shows an annual average of 71,517 cars inspected. In the inspected boat loads of canal grain an annual average is shown of over 1,000 boats. A yearly average of over 19,000,000 bushels of grain was made in the grain inspected into and out of store and a yearly average of over 24,000,000 bushels of grain was made in the number of bushels inspected into vessels.

[TO BE CONTINUED.]

The Northern Pacific has notified grain dealers on the Superior Board of Trade of changes including reduced switching charges, etc. There are changes in the rules to the effect that cars must go to the station to which they are originally billed by shippers, and the switching charges range from nothing to \$5.



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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., SEPTEMBER 15, 1894.

NO LEAK THIS TIME.

The government crop report published on the 10th of the month was a genuine surprise to most of the dealers who have become accustomed to "pointers" that have anticipated its contents very closely. This time, however, the "points" were way off. The corn condition reported by the government was 63.4, while the "points" were much below this, or in the neighborhood of 59. Consequently the report was construed as bearish until it was discovered that the report had reference only to the standing corn and had no reference to the 15,500,000 acres of corn reported as cut. But the department fooled the talent for once; and the result shows that leaks can be prevented. The government crop reports have largely lost caste; but there is no good reason why outside parties should be able to foretell or approximate the government guess.

IMPORTING RUSSIAN BARLEY.

The news that two cargoes of Russian barley had been sold at Odessa for delivery in New York at a cost of about 45 cents per bushel, and that offers had been received at Baltimore to supply any desired quantity of a prime article of Russian barley at about 48 cents, has been one of the sensations of the month. The prime Russian article is offered, duty paid, for about the price of No. 5 in Chicago. The freight is about 4 cents and the duty 30 per cent. *ad valorem*. This would leave the price at Odessa barely 30 cents a bushel.

If imports of barley are possible, alarmists say we must face an influx of foreign grain; for the duty on barley is higher than on any other cereal. But it must be remembered that we have always imported more or less barley, and that it by no means follows that Russian barley is to be followed by Russian rye, Argentine wheat and Roumanian corn. One fact is strikingly apparent at the present time. It is the tendency of all cereal grains to approach each other in price. In other words, the feeding

value of the grain to stock is the criterion of value. Such a condition has, we believe, been unparalleled in the world's history up to the present time. Should such a condition continue, it will work a temporary revolution in agriculture; but cereals like wheat and rye must inevitably lead the list in price in process of time.

TWO SPECULATIVE "DON'TS."

Not long since an Illinois grain dealer failed for a large amount. His failure was coincident with the rapid rise of corn. An examination of his affairs showed that his custom had been to receive farmers' grain and either store it or ship it away, allowing the farmer to come in and sell the grain when the price suited him. When corn went skyward the dealer went up with it, for all the farmers brought in their receipts at once.

There is a double-barreled moral with this. Don't let the farmer speculate with your capital by storing his grain until the price suits him; and don't speculate with the farmer's grain. The two dangers go hand in hand. It is good business and good morals to shun them.

A RISING GRAIN PORT ON THE BLACK SEA.

Our next number will contain an extensive illustrated description of the facilities for and the methods of handling grain at the port of Novorossisk, on the northeast coast of the Black Sea. Its magnificent natural harbor has been greatly improved by the Vladikavkaz Railway Company, which has also erected a number of elevators at that port for facilitating the handling of grain.

Its rise as a grain port has been so rapid that it is called the "Chicago of Russia." This port is the terminal of the railway system which penetrates Southwestern Siberia and Central Asia, a district which is expected soon to prove a prominent factor in the world's wheat trade. Five years ago Novorossisk was a village of fishermen, and it is expected to surpass Odessa as a grain shipping port before the decade has been finished.

CONSIGNING AND SELLING ON TRACK.

Recently we sent out a number of letters to grain dealers inquiring what is their practice in selling grain and what in their opinion are the advantages of consigning and selling on track. Some dealers have kindly favored the only journal published exclusively in the interest of their trade with a statement of their opinions and practice, which are published in full elsewhere in this number. We will be pleased to hear from others on the same subject.

The opinions and practices of those replying vary as much as could be expected, and each seems to have cogent reasons for disposing of his grain in his favorite way. A dealer cannot, in justice to his business, make a rule and follow it without exception. Cases arise in which a dealer may materially increase his profit by selling his grain in a way different from his usual practice, and when such a case arises he must be able to recognize it instantly.

Consigning and selling on track each has its advantages and weak places. When consigning the shipper can never depend upon getting any price for his grain, as the market always has time to fluctuate before his grain arrives at the grain center. Dishonest commission men are not taken into consideration, for it is not supposed that any shipper makes a practice of shipping to such. When grain is sold on track there are almost as many loopholes for the profits to leak out as when it is consigned. The grading and weighing at some of the grain cen-

ters is satisfactory, but we have received complaints against a couple from a number of country dealers who expected to secure a "sure profit" by selling on track, which shows that the grading and weighing is not above reproach.

Location has much to do with how a dealer can sell to the best advantage, as those near a central market can take advantage of the bulges and sell their grain before a collapse occurs. Other circumstances often alter the probability of selling at a profit in either way, so no rule can be established for all dealers.

THE ELEVATOR MAN IN THE FEED BUSINESS.

A contributor in this number points out a number of ways in which an elevator man can grind feed advantageously in connection with his elevator business, and we trust that elevator men who have not already put in a feed mill will give the matter fair consideration.

In the first place if the elevator is in a town of any size, in a dairying or stock raising district, a good business is assured from the start, and years, like the present, when the crops of feedstuffs are a failure, a rushing feed business could be done almost anywhere.

The elevator man has the advantage over others in that he generally has space and help to spare. His power plant is seldom occupied one-half the time; if it was he could induce his help to grind feed once in awhile at night in order to keep a supply on hand. The great variety of grains which are dumped into his receiving sink would give him a marked advantage over other feed grinders. By thoroughly cleaning all grain before shipping and sending only the best to market elevator men would receive tip-top prices for the grain shipped, and by grinding up the screenings and the low grades for feed he would secure a good price for them. Thus each branch of his business would prove of material advantage to the other.

The space, power and help which are now permitted to go to waste would be utilized and his capital would be kept at work more of the time. The combination seems to be loaded with advantages and burdened with no disadvantages.

THE FEED QUESTION.

The feed question came upon us unexpectedly. Within two months it has arisen and bloomed into a prominence that no one would have believed possible. And everybody recognizes that it may have far reaching effects on the future of both corn and wheat, as well as upon the milling industry itself. A year ago feeding wheat to hogs commenced on a slight scale. It dropped off through the winter and commenced again in the spring. In early summer it reached great proportions, and after the boom in corn it assumed the character of a craze. Wheat ground and in the shape of low grade flour is being fed everywhere. Two Chicago millers sold over 500 tons of ground wheat in one day for shipment east. In some parts of the west little wheat is being marketed, the farmers who have hogs feeding it; and train loads of low grade wheat, red dog and spoiled or musty flour are being sent to Iowa, Nebraska and other points where corn is scarce.

The government has issued a circular on the subject of wheat as animal food, and agricultural papers teem with letters and items announcing the results of experiments in feeding wheat to hogs. Even a hasty resume of the experiments and conclusions reached would fill a page. But one thing may be regarded as settled, wheat will be fed until corn becomes cheaper or the wheat so depleted that it rises out of sight. If wheat should be used to supply even a small part of the deficiency of the corn crop, a huge hole will be made in the crop. A hundred million bush-

els of corn is only 5 or 6 per cent. of the corn crop, but an equal amount of wheat is 25 per cent. of the wheat crop. The country is short about a billion bushels of grain on this crop year, and until next year the feeding question will be one of paramount importance both with farmers and in the markets.

LOWER STORAGE AND RAILWAY RATES IN THE NORTHWEST.

The cut in handling and storage rates inaugurated by the Great Northern has had exactly the result we predicted. The Minneapolis companies have followed suit, claiming that the move had been contemplated for some time. All or nearly all the elevator companies in the Northwest have made reductions, not only on this side of the line but across the border in Manitoba. The Canadian Pacific has reduced its terminal elevator rates about 50 per cent., and a reduction of $\frac{1}{2}$ cent per bushel has been announced in interior elevator rates. This has been followed by a similar cut on the charges of the private elevator companies.

Reduction seems to be the rule everywhere, and terminal elevators were bound to come to it sooner or later. A compensating advantage will be greater ease in keeping the houses full. A fall in freight rates on grain is also inevitable. Everywhere the question is being agitated, for freight rates on grain are felt to be out of proportion to the price. The Minnesota commission has just decided the Steenerson case in which Elias Steenerson asked the commission to compel the Great Northern Railroad Company to lower rates from Polk county to Duluth and Minneapolis 33 per cent. The commission took into account the low price of grain and the diminished railway earnings and decided that a decrease of 15 per cent. was about right under the circumstances. It is said that the decision will bankrupt some of the Northwestern railways, but it must be remembered that cuts of this kind in some mysterious manner always lead to increases of business. The railways, it is said, will fight this decision of the commission. No doubt the arbitrary fixing of rates is a dangerous political power; but is there any reason why railway rates should not come down like everything else?

TERMINAL CHARGES AT PHILADELPHIA.

A committee of Philadelphia business men is after the Trunk Line Association for discriminating in the matter of charges for service in transferring grain in favor of New York and against Philadelphia. The committee claims that in order to enforce the principle of differential freight rates, it is necessary to secure uniform terminal charges and services of the trunk lines on grain to competitive seaboard cities. They likewise claim that the railroads are turning a cold shoulder to Philadelphia and a warm heart to New York.

The charge seems to have pretty good foundation. Grain is hauled to New York and delivered afloat for the same rate, plus the differential of 2 cents per 100 pounds, for which it is carried to Philadelphia and carried on track to the stationary elevator. Now the expense of transferring through the elevator and of lightering alongside the vessel in New York is borne by the railroad company without any charge for the service of the stationary elevator. At Philadelphia the expense of lightering grain to line steamers is borne by the railway companies; but the cost is virtually charged back by a charge of $1\frac{1}{4}$ cents per bushel for elevator service which is rendered free in New York. The alleged discrimination is felt most keenly in the case of the tramp steamers at Philadelphia, which take their cargoes direct from the spouts of the elevator, without any lightering being required. Here is a saving to the companies of $1\frac{1}{2}$ cents a

bushel which is paid at New York and saved at Philadelphia, without any corresponding advantage to the latter port. Therefore, the committee claims that the 2 cents differential is a delusion, when the facts in regard to terminal service are taken into account; and what they want the railroads to do is to establish a schedule of charges for services which shall be the same at both New York and Philadelphia for equal service.

THE BUFFALO POOL.

The elevator people are not in the habit of proclaiming their intentions or movements from the housetop; so that it is uncertain just what has been the result of the dickering of the past few weeks. It was announced some time ago, when the old rates were restored, that the Kellogg Elevator, which withdrew from the pool, had been whipped into line again, and that the floating elevators would be inside the pool within a few days. The restoration of the old rate of seven-eighths of a cent would signify this. Thus the colossus at Buffalo gets the benefit of the reduction of rates at the head of the lakes, instead of the grain men and farmers. In fact, it seems to be about the only beneficiary of all the movements intended to benefit commerce and the grain trade.

MINNEAPOLIS AND DULUTH.

The two great Northwestern wheat centers are still handling a good bit of wheat. A year ago it was a question where the money was coming from to handle the crop which the hard times made the farmers eager to sell. The money was forthcoming, however, and last September Duluth received over 5,000,000 bushels of wheat; in October 7,500,000, and in November 6,483,000 bushels. For the entire crop year ending August 31 of this year, Duluth received 32,364,772 bushels of wheat, 5,054,347 barrels of flour, and 659,808 bushels of barley. As might be expected, the receipts of corn, oats, rye, etc., were small.

Minneapolis received 51,649,200 bushels of wheat, 5,686,960 bushels of corn, 3,418,830 bushels of oats, 1,583,680 bushels of barley, and 930,390 bushels of flaxseed. Minneapolis shipments of wheat were 8,410,900 bushels, and of flour 8,958,609 barrels. Duluth shipped 23,425,028 bushels of wheat, and the shipments of flour from Duluth and Superior were 11,723,793 barrels, of which 2,671,889 barrels were made in the two cities.

These are large figures. Not the largest in the history of Minnesota's two great wheat depots; but they are generous enough for an "off year" like '94.

A NEW PHASE OF THE ELEVATOR WAR.

The receivers and shippers of Chicago commenced a new fight on the elevator men by filing on August 24 a demand with the Illinois Central, Rock Island and Burlington railroads. This demand was that the railroads furnish them terminal facilities for the handling of grain and flaxseed at Chicago which would not subject their business to the scrutiny of competitors who manage the public grain elevators. The document in question recites that the lessees of the railway elevators are in the grain business and take possession of all grain that is consigned to other receivers, handling freight bills containing the names of shippers and points of shipment. In the same way on shipments East the elevator company knows all about the business, and can fill its own orders with the best grain and the shippers' orders with the poorest grain.

The letter was signed by fifteen firms, and is the preliminary step toward bringing the matter

before the Interstate Commerce Commission, as a violation of the clause relative to discrimination. It looks as if the fight had got where it belongs—into court—and raises the question of the relation between the railways and the public elevators and the public whom they are supposed to serve.

THE WORLD'S WHEAT.

The Hungarian Minister of Agriculture has been juggling with wheat figures, and reaches the conclusion that the world's crop this year will be 2,476,000,000 bushels, against 2,279,000,000 bushels last year, and as compared with an average crop of 2,280,000,000 for the last ten years. This would be an increase of 197,000,000 bushels as compared with the crop of 1893, and practically the same amount more than an average crop.

We do not believe the figures are intended to be bearish; for Hungary is an exporting country; but estimates of such large amounts as are involved in the total wheat crop of the world are liable to be both mistaken and misleading. It is only a few years ago that the world was reported short several hundred million bushels of wheat; and yet prices did not go to a famine basis. A difference of 5 per cent. in such large amounts means over a hundred million bushels. Of course the figures in this particular case may be approximately correct; but we certainly would advise no one to sell wheat on the strength of them. The Hungarian Minister of Agriculture is not selected with reference to his peculiar fitness as a crop guesser.

The grain men at St. Louis have been kicking very vigorously over the increase of the inspection and weighing fees of Chief Grain Inspector O'Shea to 75 cents per car. They want to know why St. Louis and Kansas City should pay more for this service than other cities. In fact, they have appointed a committee to look into the question and probe it clear to the bottom and punch a hole in that.

CHAS. COUNSELMAN took a number of underwriters down to South Chicago a few days ago to show them the fire protection he had provided. The equipment was pronounced first-class, and the Niagara Rotary Hydrant elicited much applause. It threw thousands of gallons of water over the big elevator and deluged things generally. This hydraulic wonder is made by the Barry Manufacturing Company of Muscatine, Iowa, and its work is really remarkable.

SOME shippers may think as railway managers seem to think that wheat is too cheap to tempt thieves to steal it, but they are mistaken. We have received notices of more wheat car robberies at line divisions and terminals during the past thirty days than during any like period before. The yards should be better guarded and the thieves punished to the full extent of the law when captured. As long as they are permitted to go free when captured, carriers can depend upon their continuing to break open the cars and take their contents.

THE Minnesota Railroad and Warehouse Commissioners decided at their meeting on August 20 to make no changes in the grades. Higher inspection rates, however, were established, taking effect on September 1. These are now 25 cents for each carload on arrival; for inspection from store to cars, 25 cents per car, and 50 cents per 1,000 bushels to vessels. This advance was rendered necessary through the fact that the commissioners, in carrying out the state law, were obliged to pay out \$25,000 for an elevator site at Duluth, which cleaned out the treasury.

EDITORIAL MENTION

It may not be generally known that work is progressing on the Hennepin Canal, but such is the fact.

If you have decided opinions on anything of interest to the grain trade let us have them for publication.

CHICAGO has 30,000,000 bushels of wheat in store, and the whole country the largest amount ever known at this date.

THE Illinois wheat crop was never exceeded but three times in the history of the state. The average yield per acre was 20 bushels.

ONE result of the corn disaster in Nebraska and Kansas is that many small grain stations have been closed by the railroads, temporarily.

IN the Palouse country wheat brings only 25 cents a bushel, but as the crop was prodigious, the farmers are about as well off as elsewhere.

THE grain men of Chattanooga, Tenn., want a grain inspector. A number of places we know of would be glad to let Chattanooga have theirs.

BRADSTREET's figures out that the production of flaxseed this year will be about 8,500,000 bushels, a falling off of a million and a half of bushels.

A BOTANIST in New Jersey recommends the propagation of rust as a destructive parasite to the Canada thistle. He has little hope, however, of rust attacking the Russian thistle.

A UNIVERSAL kick is going on all over Washington and Oregon, especially from farmers, for a reduction of railway tariffs on wheat. And the charges are heavy considering the price of wheat.

THE decrease in grain shipments from New Orleans has quite alarmed local dealers, but no satisfactory reason has been assigned except the general dullness of trade and the gloomy outlook in the Western states.

WE regret that through inadvertence we failed to acknowledge last month that we were indebted to the *Telegram* of Superior, Wis., for the cut of the Great Northern Elevator "X" which appeared in our last issue.

THE new wheat of the winter wheat district is so unusually heavy that it makes the old cars bulge and leak, while the poor shipper weeps and longs for the time when carriers will furnish strong cars and clean bills of lading.

FARMERS in North Dakota are complaining that some of the wheat buyers sent out this fall are "kids," who know nothing of grades, and sometimes dock outrageously and at other times take the grain, smut and all, without a word.

If anyone were asked what was the chief staple of Minnesota he would say wheat, and quite correctly. But nevertheless wheat forms only about 20 per cent. in value of Minnesota's agricultural products this year. Her wild hay, dairy products, poultry and eggs have a greater

value this year than her 50,000,000-bushel wheat crop.

TERMINAL elevator men are still docking receipts for future shrinkage and the speculators who keep the grain in store get just as much grain whether they take it out in six days or six years. They never lose anything by shrinkage.

It has often been claimed that wheat and silver always move up or down together. But recent experience does not corroborate the rule. Silver moved up to 66 cents and wheat moved down. Perhaps the dry weather caused the sign to fail.

THE peripatetic frands who sell wonderful seed to farmers and buy the crop in advance have been very much in evidence of late. When will farmers learn to trust their local grain dealers, or well-known and reputable firms, instead of biting at the golden bait held out by slick strangers?

A PLAN is said to be under consideration by the millers and elevator men of Minneapolis by which a daily price would be fixed for cash wheat by all the mills and elevators, so as to bring it in line with futures. Opposition to it has developed, and it is not believed that the plan will be adopted.

It is a wonder more of our country grain dealers do not seek to sell their wheat and corn by sample direct to the wheat and corn millers. Some country dealers have and many others can build up a good trade with millers by studying the wants of individual customers and making a sincere effort to supply them.

THE railways put their foot in it at Kansas City when they refused to accept elevator weights on grain shipments. The state board of railway and warehouse commissioners has decided that the railways must put in the track scales. The present rule of thumb of weighing cars in motion will be done away with.

WE regret our inability to attend the christening of the new terminal elevator, which James Stewart & Co. have completed for the Ryan Elevator Company of St. Louis. About 500 guests were present, and a right royal good time was the result of the good cheer and good fellowship. A brief account of this elevator is given on another page.

THE 15,500,000 acres of corn figured in the reports as cut for fodder must not be considered as totally wiped out of the corn crop. Competent judges say that 100,000,000 bushels is a fair amount to allow for the amount of corn which will be obtained from this source. It must be remembered that the fodder question largely affects the grain question.

THE board of managers of the Pittsburg Grain and Flour Exchange has passed a resolution withholding quotations from the press. The reasons given for this action are that the quotations cannot be relied upon as representing the actual market, and that dealers not members make use of them. We await with interest the result of this new departure.

THE firm of John W. Barwell & Co. of this city reports a good business since the opening of the season. They have been connected with the feed business for over 20 years in this country and in Europe, and are agents for several large mills and factories. The firm makes a specialty of the Western trade and have representatives in nearly all of the principal markets. They do a large business in their line, and

their wide experience enables them to transact business for their patrons in a very satisfactory manner.

THE corn crop this year will be the smallest since 1881, when the yield was 1,194,000,000 bushels. This is assuming that the crop this year will rise slightly above 1,200,000,000 bushels, which many regard as about the proper figure.

HOMER BALDWIN, a well-known miller of Youngstown, Ohio, began milling in 1846, and paid 50 cents a bushel for wheat. This summer, for the first time since, he has bought wheat at a similar price. In 1846 he sold bran for \$5 per ton, while this summer, with wheat at the same price, bran sold for \$15 per ton, or only \$1.00 per ton less than the wheat cost.

THE "hard times" have produced an unusually large crop of "fake" commission houses, who flood the country with circulars dilating upon the easy way to wealth through the margin route. We hardly think it worth while to warn intelligent readers of these cormorants. They draw their patronage from the ranks of those who know absolutely nothing of markets, men or methods.

WILL the grain dealers of the country tolerate the abuses which are driving them along the road to failure or will they take the reins in their own hands and by means of organization drive their business along the road to success? A little organized effort against many of the abuses which now encumber the trade would go far toward ameliorating the condition of the country grain trade.

It is a remarkable fact that the government crop report published in July credited the country with a possible yield of 2,200,000 bushels of corn, 600,000,000 bushels of oats and about 400,000,000 bushels of wheat or 3,200,000,000 in all. It is now assumed that there will be about 2,200,000,000 in all, or a loss of a billion bushels of grain in 60 days. The 60 days of drouth cost the country over \$8,000,000 per day.

AN Indiana paper has thought out a method of closing all the "gambling" boards of trade. It is for the farmers to form a syndicate and for one year agree to raise only enough wheat each for his own bread. Then the farmers are to buy wheat for May delivery of the gamblers and insist on its delivery. The recipe is guaranteed to bust all the boards of trade, or rather all their members, if the "syndicate" plan is faithfully carried out.

WE were in error in announcing in our August number that a certain make of gasoline engine had been ordered for driving the flouring mill at Ponca, Neb. The fact is, that the Otto Gas Engine Works, through their Omaha representative, secured the order, which was for a 36-horse power engine. The Otto people have been placing a number of their engines in flour mills, all of them appearing to give satisfaction. One of the points urged in their favor is a perfectly steady motion.

THE man-with-a-scoop is having a splendid time at some country stations these days, and his shadow haunts the regular dealers in their dreams. With cars for storehouses, a hat for an office and his handling machinery thrown over his shoulder, he worries the regular dealer by night as well as by day, and yet none but the Illinois Grain Dealers' Association has taken a determined stand against him. Until the irregular buyers are required to give some assistance to the local government in the form of license fees they will continue to travel about

the country and skim off the cream of the business.

A MEETING was held in the directors' room of the Chicago Board of Trade on Thursday, September 13, in the interest of the Georgian Bay Ship Canal. It was shown that the proposed route would shorten the distance from Chicago to the coast something over 300 miles.

A CONVENTION will be held at Toronto on September 17-20, to discuss the best means of securing a 20-foot channel so that ocean vessels can reach the cities of the great lakes. We acknowledge receipt of an invitation to attend from the chairman, Alderman J. Enoch Thompson.

AFTER the notice of the trial test of the fire apparatus of the Counselman Elevator at South Chicago was written, an opportunity of an actual test of efficiency was given. The big lumber yard near the elevator caught fire and burned, and the hydrants saved the elevator from sharing the same fate.

THE people of New York state will be called upon this fall to decide definitely by their votes what shall be the future policy of the state in regard to the canals. No doubt every effort will be made by interested corporate power to defeat a liberal policy for the canals; but the friends of the waterways are alive and no doubt have the great majority of the people with them.

WE trust our readers remembered to "pull the string" on the wrapper of this paper. The Williams Wrapper, which is simply a black cord embedded in the paper, will hereafter be used in mailing this journal. It is necessary for the publisher to roll the paper in mailing, and with this wrapper it is only needful to pull on one end of the black cord to release the paper without the use of a penknife, the thumbnail or anything else. It saves a deal of annoyance.

A CORRESPONDENT in this number tries to pick a flaw in Mr. Carter's system of detecting transpositions in elevator accounts, but fails. He takes supposititious cases and shows that Mr. Carter's mysterious multipliers will not prove an error in the first figure of the columns indicating bushels or the same of pounds. The system is not supposed to work with numbers taken at random, but it does detect errors and transpositions in actual weights taken from elevator account books. Why it will do so we are unable to explain, but it does it. If any elevator accountant has found that it failed in a single instance we would be pleased to know it. If anyone doubts the system's reliability we trust they will give it a fair trial with weights as they appear on their books.

LAST month we gave a description and illustration of the pneumatic transfer and steel storage elevator lately built for the Iron Elevator Company at Toledo, Ohio. At that time the machinery was receiving its first test. Since then it has been put into good shape for business and is now, we understand, working very satisfactorily. Of course this elevator is of unusual interest as it is a new departure from methods heretofore used in handling and storing grain; and we understand that already the company controlling the system are making plans for a number of plants which will soon be commenced in Chicago and at other points. The plan of introduction and terms offered for the use of the system are very liberal, and interested parties can readily obtain information by calling at the offices of the company, Manhattan Building, Chicago, or writing to the secretary. The company calls special attention to the patents which

have been issued it and others pending to protect both the basic principles and their application.

ANOTHER row is on between the Chicago Board of Trade and the elevator men, though this time there is only one elevator to fight. The *modus vivendi* which was patched up between the board and the elevator men was signed by the secretary of the National Elevator Company, of which Murry Nelson is the substantial owner. Mr. Nelson repudiated the obnoxious rule 21, and the board threatened to discipline him for uncommercial conduct. Whereupon, as a preliminary move, Mr. Nelson has got out an injunction to prevent the board from declaring the National Elevator irregular, pending his fight on rule 21, which he says infringes on the property rights of elevator owners.

A THIRD of a century is a long time to be in the same business in the same market, yet that is nearly the period of the business life of J. J. Blackman of J. J. Blackman & Co., 95 Broad street, New York. To be exact, on the first of this month he enters upon his thirty-first consecutive year on the New York market, handling all kinds of flour, grain, feed, corn goods, peas, beans, seeds and hay. Mr. Blackman started out to do a strictly commission business, never purchasing under any circumstances; and to this rule his firm has strictly adhered. In this way they are able to consider the interests of the shippers alone and build up an extensive and constantly increasing business. That such a policy rigidly pursued is advantageous to both parties is clearly proved in their own case. They will be pleased to serve shippers strictly as commission merchants, and invite correspondence from those wishing to ship to their market.

Trade Notes.

To some the springs from hillsides flowing
Are best of all, they think;
But to beat all other fluids going
Depend on printers' ink.
For printers' ink has power surprising,
As we can prove to you;
Send to us your advertising
And SEE what it will do.

Ed Wertheim of 207 Lake street, Chicago, has sent us a very neat catalogue of German Asbestos goods.

What profiteth a man to make goods and not sell them? We can assist you in placing your goods before buyers.

It takes more money and greater exertion for a merchant to keep up with his competitors without advertising than it does for him to employ its agency discreetly.

H. E. Richardson, representing The Prinz & Rau Manufacturing Company, has opened an office at the Corn Exchange, Minneapolis.

The Kansas City Hay Press Company has begun suit in the United States Court against H. F. Devol, George Devol and W. A. Livengood to recover damages for infringement on patents. The amount claimed in the petition is \$50,000. The petition recites the fact that the plaintiff company was the owner of certain valuable patents on hay presses, and that the defendants have used the same devices in defiance of the protection of their patents, and in this way have damaged their business.

The notion that any kind of an ad will do results in frequent advertising failures. Why the same amount of attention should not be expended on the advertising of a firm that is given to the other branches is an enigma. Nothing pays that is conducted upon unsound principles, and it is not good business to accept anything but the best when you pay a first-class price. It costs as much to run poor ads as good ones; the fact is, it costs more, for you lose the profits you might realize if your space was occupied by a trade-drawing announcement.

MINOR MENTION.

For the fiscal year ending June 30 Baltimore exported 258,582 tons of corn, 302,036 tons of wheat, 6,881 tons of cloverseed and 294,258 tons of flour.

It is said that the Illinois Central will soon issue a new tariff reducing the rate on grain from Chicago to New York to 21 cents per 100 pounds. The reduction would be highly beneficial to Chicago grain shippers and commission men.

Minnesota and North Dakota farmers are petitioning for a reduction of freight rates on wheat. They point out that the elevator and freight charges on wheat from some interior points to Duluth or Minneapolis amount to one-half the value of the wheat.

Grain men of Louisville, Ky., are protesting against the way the office of Sealer of Weights and Measures is filled. The ordinance provides for an annual inspection only, and when that inspection is in the hands of a political heeler what good it might otherwise accomplish is rendered nil.

Grain, whether in carrier's hands or not, has an inherent tendency to shrink. In six months from the time it is threshed, it is said, wheat will shrink 6 per cent., or two quarts to the bushel; so it follows that 94 cents when it is threshed in August is as good as \$1 in February. Corn will shrink at the rate of from 100 bushels to about 80.

A machine has been successfully introduced at Ash-tabula, Ohio, for dumping the contents of a car of coal into the holds of vessels without the old system of buckets, rotary derricks, etc. The loaded car is drawn high into the air on a cantilever, which is tilted by hydraulic power, the end containing the car being lowered through the hatch into the hold of the vessel. Cargoes aggregating as much as 3,500 tons are loaded in a single day. Will grain ever be handled this way?

The average per capita consumption of wheat annually in the United States is estimated at 280 pounds or more. The consumption of rice averages slightly less than 4 pounds, being about the same in France and Germany, nearly 10 pounds in Great Britain and Ireland, and nearly 14 pounds in Italy. In India great variation is shown in rice consumption, from 30 pounds per capita in Punjab to 110 pounds in the Northwest Provinces and Oudh, 243 pounds in Assam, 365 pounds in Bengal and the Central Provinces, and 545 pounds in Bombay and Sind.

SCREENINGS.

Farmer—"What's the best seeds you can recommend?" Dealer—"Pro-seeds."

Iowa probably has gone drier this year than any year since the prohibition agitation began.

Out in Iowa the drouth has been so severe that they won't allow a red-headed girl to wander far afield for fear of setting the prairies on fire.

Procrastination may be the thief of time and the sandbagger of opportunity, but the bullish speculator thrives on the principles of buy and buy.

"I'm pressed for debts," remarked the hay, as the mortgagee stood by and tallied the bales which were necessary to lift his claim against the crop.—*Hay There.*

Sabbath-school Teacher—"For they have sown the wind, and they shall reap"—what? Bright Boy (whose father speculates through a bucket-shop)—"Air plants."

"How did your wheat turn out this year?"

"Miserable. Regular Peffer wheat."

"Peffer wheat?"

"Yes. Nothing to it but beard."

According to a Lawrence paper, a two-line advertisement of a Eudora farmer directed to "parties wishing good rye," has almost swamped the postoffice with inquiries from men who are ordinarily satisfied with drugstore bourbon.

"God works in a mysterious way," etc. The "per-nicious" practice of mixing grain was once greatly beneficial to this country. Humboldt says that wheat came to be introduced to the Western continent from some grains having been mixed with rice which came from Spain.

RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during August, 1894 and 1893, of seeds, hay and broom corn:

Repts.	Timothy lbs.	Clover lbs.	Other grass seeds, lbs.	Flax-seed, bu.	Broom corn, lbs.	Hay, tons.
1894 ..	4,696,732	456,631	156,378	1,386,364	664,050	22,387
1893 ..	4,798,870	138,011	191,462	431,544	228,700	21,306
Shipts.						
1894 ..	3,540,854	481,666	1,087,553	502,525	477,750	2,029
1893 ..	5,231,786	135,674	1,138,065	351,257	402,326	4,211

RANGE OF PRICES AT CHICAGO.

The daily range of prices for cash grain at Chicago since August 15 has been as follows:

August.	NO. 2 RED NO. 2 SFG W. WHEAT.		NO. 2 CORN.		NO. 2 OATS.		NO. 2 RYE.		NO. 3 BARLEY.		NO. 1 FLAX SEED.	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
15	54 1/2	55 1/2	56 1/2	57	30 1/2	31	48	48	53	55	127	129
16	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	47	47	52	55	126 1/2	128 1/2
17	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	48	48	52	55	125 1/2	126 1/2
18	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	54	54	124 1/2	125
19	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
20	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
21	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
22	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
23	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
24	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
25	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
26	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
27	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
28	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
29	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
30	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
31	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
1	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
2	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
3	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
4	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
5	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
6	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
7	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
8	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
9	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
10	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
11	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
12	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
13	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
14	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2
15	53 1/2	54 1/2	55 1/2	56 1/2	30 1/2	31	46 1/2	46 1/2	52	53	123	124 1/2

*Labor Day.
For the week ending August 18 prime contract timothy sold at \$3.50@5.75 per cental; prime contract clover at \$9.75@10.00; Hungarian at \$0.70@1.25; German millet at \$0.50@0.90; buckwheat at \$1.10@1.60 per 100 pounds. No. 1 flax on track sold at \$1.25@1.28 1/2. The receipts of hay for the week were 3,953 tons, against 3,690 tons the previous week. Shipments for the week were 306 tons, against 401 tons for the previous week. During the early part of the week the market for timothy hay ruled dull; later the arrivals were smaller, the demand improved and a firmer feeling prevailed. Sales of No. 1 timothy ranged at \$11.00@12.00; No. 2, \$10.00@10.50; mixed, \$7.00@10.00; not graded, \$8.50@11.25; Illinois upland prairie, \$7.00@8.50; Indiana, \$5.50@6.00 for poor and heating, and \$7.50@9.50 for fair to choice; Kansas, \$10.00@11.50 for fair to fancy; Iowa, \$8.00 for heating and \$9.50@11.50 for fair to fancy; bedding hay \$5.50. Wheat straw sold at \$4.50; oat straw at \$4.50 @5.00, and rye straw at \$6.00@6.50.

For the week ending August 25 prime contract timothy sold at \$3.40@5.80 per cental; prime contract clover at \$8.75@9.75; Hungarian at \$0.90@1.25; German millet at \$0.60@0.90; buckwheat at \$1.10@1.60 per 100 pounds; No. 1 flax on track sold at \$1.00@1.25. The receipts of hay for the week were 4,811 tons, against 3,953 tons the previous week. Shipments for the week were 358 tons, against 306 tons for the previous week. Arrivals of all descriptions were large and the demand only moderate. Sales of No. 1 timothy ranged at \$10.50@11.50; No. 2 \$9.50@10.50; mixed, \$8.00@10.00; not graded, \$8.00@9.00 for heating, and \$9.00@10.50 for fair to good; Illinois upland prairie, \$7.00@9.00; Indiana, \$7.00@9.50; Kansas, \$8.00 for poor and \$9.75@11.75 for fair to fancy; Iowa \$10.50@12.00 for good to fancy. Wheat straw sold at \$4.50@5.00, oat straw at \$4.75@5.00, and rye straw \$6.00@6.60.

For the week ending September 8 prime contract timothy sold at \$3.20@5.35 per cental; prime contract clover at \$8.50@9.00; Hungarian at \$0.90@1.25; German millet at \$0.60@0.90; buckwheat at \$1.10 @1.60 per 100 pounds. No. 1 flax on track sold at \$1.01@1.27. The receipts of hay for the week were 7,390 tons, against 7,353 tons for the previous week. The shipments for the week were 887 tons, against 620 tons for the previous week. The market ruled dull during the week. The offerings were large and the great bulk consisted of poor and medium grades for which the demand was exceedingly light. Sales of No. 1 timothy ranged at \$9.50@11.00, outside late in the week; No. 2, \$8.50@9.50; mixed, \$7.00@9.00; not graded, \$9.50; Illinois upland prairie, \$6.00@8.00; Indiana, \$6.50@8.50; Kansas, \$8.00@10.75 for fair to

fancy; Iowa, \$6.00@10.75 for poor to fancy. Wheat straw sold at \$4.00@4.50; oat straw at \$4.50@4.75, and rye straw at \$5.00@6.25 for poor to good.

RECEIPTS AND SHIPMENTS AT DETROIT.

The receipts and shipments of grain and hay at Detroit, Mich., during the 5 weeks ending September 1, as compared with the same period of the preceding year, were, according to Geo. M. Lane, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	1,131,394	1,806,277	571,505	1,586,495
Corn, bushels.....	102,459	100,044	19,251	25,942
Oats, bushels.....	468,390	331,85	256,071	89,503
Barley, bushels.....	5,800			
Rye, bushels.....	37,262	23,497	11,715	18,423
Hay, tons.....	700			
Flour, barrels.....	17,687	14,711	11,176	6,585

RECEIPTS AND SHIPMENTS AT ST. LOUIS.

The receipts and shipments of grain and hay at St. Louis, Mo., during the month ending August 31, as compared with the same period of the preceding year, were, according to Geo. H. Morgan, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	2,253,528	2,394,508	185,412	863,439
Corn, bushels.....	661,448	1,841,672	652,233	1,917,873
Oats, bushels.....	1,024,144	823,838	236,304	166,222
Barley, bushels.....	910	852	129	200
Rye, bushels.....	8,374	16,100	5,975	4,596
Hay, tons.....	16,161	17,495	3,683	2,267
Flour, barrels.....	125,842	85,485	223,650	195,323

RECEIPTS AND SHIPMENTS AT MINNEAPOLIS.

The receipts and shipments of grain and hay at Minneapolis, Minn., during the 5 weeks ending September 1, as compared with the same period of the preceding year, were, according to G. D. Rogers, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	3,018,240	1,962,270	706,840	775,550
Corn, bushels.....	42,670	117,250	4,820	28,650
Oats, bushels.....	298,700	215,760	69,540	66,760
Barley, bushels.....	59,720	24,890	24,130	15,720
Rye, bushels.....	31,460	7,120	15,930	13,620
Flaxseed, bushels.....	60,390	5,720	27,700	4,200
Hay, tons.....	2,521	2,413	50	30
Flour, barrels.....	9,159	5,226	893,046	763,953

RECEIPTS AND SHIPMENTS AT SAN FRANCISCO.

The receipts and shipments of grain and hay at San Francisco during the month ending August 31, as compared with the same period of the preceding year, were, according to T. C. Friedlander, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, centals.....	628,473	1,597,663	573,933	1,312,837
Corn, ".....	10,090	11,469	5,222	2,907
Oats, ".....	41,979	38,928	1,024	2,516
Barley, ".....	370,255	829,624	169,641	66,900
Rye, ".....	2,501	5,591		
Hay, tons.....	22,963	16,599	624	
Flour, 1/4 bbls.....	416,424	398,188	bbls. 80,350	77,492

RECEIPTS AND SHIPMENTS AT TOLEDO.

The receipts and shipments of grain and hay at Toledo, Ohio, during the 5 weeks ending September 1, as compared with the same period of the preceding year, were, according to Denison B. Smith, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	5,735,000	3,170,100	4,208,200	3,269,600
Corn, bushels.....	121,000	499,800	27,300	378,000
Oats, bushels.....	209,400	131,700	75,800	64,700
Barley, bushels.....	2,000	500		1,200
Rye, bushels.....	72,300	89,100	15,900	34,700
Clover seed, pounds...	3,065	14,088	1,428	7,337
Flour, barrels.....	8,545	16,073	200,440	97,125

DESTINATION OF AMERICAN WHEAT EXPORTS.

The last report of the Bureau of Statistics shows that the destination of the wheat exported from the United States was as follows:

Countries.	Month ending July 31.		Seven months ending July 31.	
	1894.	1893.	1894.	1893.
United Kingd'm	3,391,800	6,222,177	21,967,478	34,404,744
Germany.....	283,388	315,717	957,276	1,570,219
France.....	88,109	836,605	2,271,733	5,759,696
Other countries in Europe....	1,153,146	4,138,561	8,994,317	17,477,359
Brit. North Am. Possessions...	622,193	925,829	2,250,373	3,777,525
Mexico.....		600	8,550	6,163
Cent. Am. states & Brit. Hond	18,425	3,78	35,662	25,663
West Indies and Bermuda.....			7,138	9,575
Brazil.....	16	14	43	16,026
Other countries S. America...	75	800	2,271	3,678
Asia & Oceania	818	646	7,569	7,023
Africa.....			1,377	295,514
Total bushels	5,557,970	12,444,729	36,504,087	63,353,185

DESTINATION OF AMERICAN CORN EXPORTS.

The last report of the Bureau of Statistics shows the destination of the corn exported from this country to be as follows:

Countries.	Month ending July 31.		Seven months ending July 31.	
	1894.	1893.	1894.	1893.
United Kingdom.	115,885	1,124,199	16,873,299	10,991,225
Germany.....	323,411	571,735	6,553,724	3,616,661
France.....	4,720	200,000	1,557,032	1,226,534
Other countries in Europe.....	295,401	1,276,175	6,789,787	5,285,658
British North Am. Possessions.....	54,612	2,028,515	3,038,928	6,427,596
Mexico.....	10,567	147,993	113,249	2,258,129
Cent. Am. States & Brit. Hond's	19,058	11,866	291,227	129,561
Cuba.....	129,811	144,301	649,645	675,730
Puerto Rico.....		1,884	14,390	16,814
Santo Domingo...	290		2,181	947
Other West Indies and Bermuda ..	56,752	66,718	394,475	352,251
South America...	35,803	36,661	72,961	347,459
Asia and Oceania	760	879	5,348	11,641
Other countries ..		4	3,717	3,164
Total bushels.	1,046,600	5,910,930	26,659,963	31,343,370

RECEIPTS AND SHIPMENTS AT PEORIA.

The receipts and shipments of grain and hay at Peoria, Ill., during the 5 weeks ending Sept. 1, as compared with the same period of the preceding year, were, according to R. C. Grier, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, hushels.....	288,000	126,100	228,600	85,800
Corn, hushels	896,850	533,350	110,500	148,450
Oats, hushels	1,747,600	2,152,900	1,346,300	2,043,500
Barley, bushels,	11,200	4,200	5,600	14,700
Rye, bushels.....	3,600	2,400	4,200	3,000
Mill Feed, tons,	863	2,550	6,079	3,959
Hay, tons.....	910	2,000	350	512
Flour, barrels.....	28,500	31,450	28,315	31,010
Spirits & Liquors,hbls.	3,763	863	22,917	13,008
Syrup & Glucose, bbls.	1,100	1,926	50,144	19,479

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, Sept. 8, 1894, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany.....		29,000	120,000		
Baltimore.....	1,138,000	84,000	226,000	12,000	
Boston.....	190 0 0	23,000	16,000		
Buffalo.....	1,396,0 0	239,0 0	49,000	20,000	113,000
do afloat.....					
Chicago.*.....	26,037,000	1,457,000	1,327,000	157,000	8,000
do afloat.....					
Cincinnati.....	24,000	28,000	188,000	16,000	3,000
Detroit.....	1,610,000	3,000	53,000	18,000	3,000
do afloat.....					107,000
Duluth.....	2,638,000		2,000	3,000	
do afloat.....					
Indianapolis.....	442,000	25,000	41,000	1,000	
Kansas City.....	1,301,000	26,000	182,000	1,000	
Milwaukee.....	603,000		50,0 0	4,000	170,000
do afloat.....					
Minneapolis.....	5,268,000		35,000	8,000	4,0 0
Montreal.....	544,000		60,000	9,000	1,000
New York.....	11,876,000	280,000	2,159,000	4,000	
do afloat.....	154,000				
Oswego.....	18,000				30,000
Peoria.....	156,000	23,000	480,000		
Philadelphia.....	1,568,000	26,000	372,000		
St. Louis.....	6,126,000	49,000	271,000	1,000	
do afloat.....					
Toledo.....	3,951,000	11,000	329,000	42,000	
do afloat.....					
Toronto.....	29,000		17,000		46,000
On Canals.....	2,210,000	440,000	682,000		229,000
On Lakes.....	2,537,000	913,000	1,156,000	26,000	467,000
On Miss. River.....					
Total.....	69,168,000	3,646,000	7,875,000	322,000	1,121,000
Corresponding date, 1893.....	56,140,000	5,657,000	4,072,000	358,000	357,000

*Estimated from the best data available in advance of official figures.

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector George P. Bunker the grain received at Chicago during the month of August, 1894, was graded as follows:

WINTER WHEAT.

Railroad.	White.			Hard.			Red.			No Grade.
	2	3	4	1	2	3	1	2	3	
C. B. & Q.....	1	2	25	7	1	697	65	7	3	
C. R. I. & P.....	1	213	28			91	151	4		
C. & A.....	1	14	1	173	74	867	374	30	4	
Illinois Central.....	1	1	87	13		2824	359	23	5	
Freeport Div.....			13			5	1			
Galena Div. N. W.....					1				1	
Wis. Div. N. W.....						8				
Wabash.....	3		20	9		1337	786	42	8	
C. & E. I.....	11	1		1		1915	562	14	2	
C. M. & St. P.....			4	1		10	4			
Wis. Cent.....										
Gr. Western.....			5	49		35	4	36	4	
A. T. & S. Fe.....			80	31		3 45	154	8	7	
Through & Spec.....	9	5		14		3858	435		3	
Total each grade.....	21	26	1	3	635	214	11992	2895	168	33
Total W. wheat.....		48			852					15089

Twenty-five cars No. 3 and 3 cars of No 3 Colorado wheat are not shown in the above table.

CORN.

Railroad.	Yellow.		White.		2	3	4	No Grade.
	2	3	2	3				
C. B. & Q.....	570	12	82	3	639	15	22	7
C. R. I. & P.....	177	12	11	10	223	21	1	
C. & A.....	378	32	101	14	277	35	7	
Illinois Cent.....	993	22	316	12	299	15	29	3
Freeport Div.....	61		9	1	61	13	2	
Gal. Div. N. W.....	47	9	6		70	18	12	5
Wis. Div. N. W.....	4		3		1		1	
Wabash.....	362	55	169	32	97	38	7	4
C. & E. I.....	57	11	66	4	65	4	2	2
C. M. & St. P.....	78	3	1	1	55	21	4	
Wis. Central.....								
C. G. Western.....	22	5			70	1	3	
A. T. & S. Fe.....	148	27	18	12	172	31	7	
Thbr'gh & Spel.....	57	1	22		25	6	8	2
Total each grd.....	2,954	189	804	89	2,064	218	105	23
Total corn.....								6,446

OATS.

Railroad.	White.			2	3	White Clipped.		No Grade.
	1	2	3			1	2	
C. B. & Q.....	1	799	321	231	19			4
C. R. I. & P.....		385	48	86	13			1
C. & A.....		314	129	303	37			2
Illinois Central.....		1,159	348	966	54			7
Freeport Div.....		84	19	21	5			
Galena Div. N. W.....		218	151	86	11			2
Wis. Div. N. W.....		85	18	4	1			
Wabash.....		341	237	315	148			12
C. & E. I.....		203	90	492	20			1
C. M. & St. P.....		197	87	41	27			
Wisconsin Central.....		1						
C. G. Western.....		76	35	19	10			3
A. T. & S. Fe.....		178	38	108	10			
Through & Special.....		153	114	109	25			4
Total each grade.....	1	1,193	1,635	2,781	381	1		36
Total oats.....								9,028

SPRING WHEAT.

Railroad.	Northern.	2	3	4	No Grade.	White.		Mixed Wheat.
						1	2	
C. B. & Q.....		6						1
C. R. I. & P.....		6	1					1
C. & A.....								
Illinois Central.....				1				
Freeport Div.....								
Galena Div. N. W.....				1				
Wis. Div. N. W.....								
Wabash.....			1					
C. & E. I.....								
C. M. & St. P.....		2	1					
Wis. Cent.....								
C. Gr. Western.....								
A. T. & S. Fe.....								
Through & Special.....		44	4		1			
Total each grade.....		58	7	2	1			1
Total sp. wheat.....					68			2

RYE.

Railroad.	1	2	3	No Grade.
C. B. & Q.....		30	3	1
C. R. I. & P.....		7	3	
C. & A.....		10	1	
Illinois Central.....		19		
Freeport Div.....		3	1	
Galena Div. N. W.....		11		1
Wisconsin Div. N. W.....		2		
Wabash.....		6	5	
C. & E. I.....		6	5	
C. M. & St. P.....		13	3	
Wisconsin Central.....				
C. G. Western.....		3		
A. T. & S. Fe.....		1	1	
Through & Special.....		8	1	
Total each grade.....		119	23	2
Total rye.....				144

BARLEY.

Railroad.	Bay Brewing.	Chevalier.	3	2	3	4	5	No Grade.	Total No. Cars all grain by Roads.
C. B. & Q.....			28		5				3,608
C. R. I. & P.....					24	3			1,520
C. & A.....									3,178
Illinois Central.....			1						7,557
Freeport Div.....			2		33				334
Galena Div. N. W.....					4	1			683
Wis. Div. N. W.....			65		81	1			275
Wabash.....						1			4,035
C. & E. I.....									3,534
C. M. & St. P.....			75		195		1	1	828
Wisconsin Central.....					1				2
C. G. Western.....			1		49	1			395
A. T. & S. Fe.....									1,404
Through & Special.....			3						4,931
Total each grade.....			175		392	7	1	1	32,284
Total barley.....								579	
Total grain.....									32,284

EXPORTS FROM ATLANTIC PORTS.

The exports of breadstuffs, as compiled by George F. Stone, secretary of the Chicago Board of Trade, from the Atlantic ports during the two weeks ending September 8, as compared with same weeks last year, have been as follows:

	For the week ending Sept. 8.		For the week ending Sept. 1.	
	1894.	1893.	1894.	1893.
Wheat, bu.....	152,800	2,672,000	1,447,000	2,164,000
Corn.....	28,000	1,054,000	157,000	730,000
Oats.....	22,000	585,000	1,000	230,000
Rye.....		17,000		8,000
Flour, bbls.....	289,000	352,000	387,000	400,000

RECEIPTS AND SHIPMENTS AT DULUTH.

The receipts and shipments of grain and hay at Duluth, Minn., during the month of August, as compared with the same period of the preceding year, were, according to Frank E. Wyman, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	2,721,815	1,508,237	2,579,211	3,856,557
Corn, bushels.....	17,335		17,337	
Oats, bushels.....	7,040		269,381	
Barley, bushels.....	41,922		422	
Rye, bushels.....	1,867			
Flaxseed, bushels.....	23,507			
Flour, barrels.....	577,527	734,816	890,008	964,791
Output, flour.....	328,623	194,987		

RECEIPTS AND SHIPMENTS AT MILWAUKEE.

The receipts and shipments of grain and hay at Milwaukee, Wis., during the 5 weeks ending Sept. 1, as compared with the same period of the preceding year, were, according to Wm. J. Langson, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	846,139	825,810	49,817	229,746
Corn, bushels.....	148,200	81,950	7,800	5,200
Oats, bushels.....	1,033,0 0	436,000	382,015	128,025
Barley, bushels.....	1,395,200	26,400	362,300	7,200
Rye, bushels.....	54,638	73,080	600	33,090
Grass seed, pounds.....	209,700	26,390	143,054	152,000
Flaxseed, bushels.....	53,812	*9,860	12,760	*
Broom corn, lbs.....				
Hay, tons.....	692	885	154	514
Flour, barrels.....	129,200	104,478	176,538	212,078

*The most of this flaxseed was reconsigned to Chicago, but was erroneously omitted from reports made by the railroads to the Chamber of Commerce.

BUFFALO'S GRAIN TRADE.

The receipts of grain, flour included, at Buffalo, N. Y., during August were 17,293,635 bushels, against 22,725,119 in August, 1893, and 24,835,180 in August, 1892. The receipts from the opening of navigation to September 1 during the last 15 years were as follows:

	Flour, Barrels.	Grain, Bushels.	Grain, Inc. Flour, Bu.
1894.....	5,249,963	53,837,054	80,086,869
1893.....	5,112,389	76,385,364	101,947,309
1892.....	4,981,110	72,020,519	95,680,791
1891.....	3,327,016	58,106,556	73,909,880
1890.....	3,497,701	53,867,412	69,986,960
1889.....	2,279,641	47,252,311	58,650,515
1888.....	2,629,014	41,927,156	55,073,271
1887.....	2,191,297	40,577,917	60,501,399
1886.....	2,427,413	42,575,177	54,812,242
1885.....	1,208,767	28,562,622	34,581,457
1884.....	974,896	25,291,253	30,180,733
1883.....	985,511	34,082,022	39,909,587
1882.....	728,601	28,496,428	31,948,463
1881.....	479,965	36,183,134	38,080,080
1880.....	573,847	66,022,681	68,891,997

ELEVATOR AND GRAIN NEWS

A new brewery is to be erected at Jeannette, Pa.

J. G. Wheeler is buying grain at Janesville, Minn.

The elevator at Port Emma, N. D., has been closed.

W. B. Post's elevator at Cedar, Iowa, is completed.

Heath Station, Ind., is to have a new elevator this fall.

Cornelius Schneider is buying grain at Letcher, S. D.

A \$200,000 brewery is being contemplated for Rockford, Ill.

A brewing establishment is to be erected at Oakland, Cal.

A new grain firm is now doing business at Rooks Creek, Ill.

Downing & Blaesser's elevator at Alcester, S. D., is completed.

The Moscow (Wash.) Grain Company has been incorporated.

A \$10,000 grain warehouse will be erected at Portsmouth, Md.

Reynolds & Watson have opened a grain office at Rantoul, Ill.

John Suhr has started in the grain business at Bowdle, S. D.

Daeuffer & Co. intend to build a new brew house at Allentown, Pa.

W. F. Whiting is erecting a 32x60-foot elevator at Auburn, N. Y.

W. H. Luce is building a grain warehouse near Hayfield, Minn.

E. D. Bomberger and son have erected an elevator at Stratford, Ill.

George Zett will build additions to his brewery at Syracuse, N. Y.

The farmers' warehouse at Mapleton, Minn., is now in working order.

Rhode Bros. have completed their large elevator at Armstrong, Iowa.

Elliott & Bach's elevator at Centreville, S. D., is now in operation.

Clutter & Wetherill's elevator at Spencerville, Ohio, is now completed.

Davis & Grover are now operating their new elevator at Bentley, Ill.

Ammon & Brown have leased the farmers' elevator at Hiawatha, Kan.

N. H. Fish is operating the S. Y. Hyde elevator at Lake Preston, S. D.

Frank Meeker, grain dealer of Lenora, Kan., is closing out his business.

The farmers' elevator at Lidgerwood, N. D., has commenced business.

Peavey & Co.'s new Republic Elevator at Minneapolis is just completed.

Cattell & Co., grain brokers of New York City, have dissolved partnership.

Mr. Duffy, grain dealer of Swanington, Ind., reports a prosperous business.

There is a project for the erection of a cotton oil mill at Newport, Ark.

It is reported that there is a project for an elevator at Brandon, Manitoba.

The Davenport Milling Company is erecting an elevator at Toronto, S. D.

N. W. E. Long will erect a 15-ton cottonseed oil mill at Hurtsboro, Ala.

Hon. J. F. Cartwright is now running his new elevator at Davison, Mich.

Moffitt, Tinkle & Co. of Kalispel, Mont., have built a 50,000-bushel elevator.

The Dubuque (Iowa) Malting Company will erect a brewery to cost \$250,000.

Marshall & Johnson are building an elevator at Thief River Falls, Minn.

Brooks Bros. have bought the Herriot & Douglas Elevator at Hoople, N. D.

The Franklin Brewing Company of Boston, Mass., will erect a large brewery.

The Edw. F. Dibble Seed Company has been organized at Honeoye Falls, N. Y., with a capital stock

of \$20,000. The directors are Edw. F. Dibble, F. R. Jones and A. M. Holden.

The Interstate Grain Company has opened its elevator at Dodge Center, Minn.

H. Bokhoff's large granary and corn crib at Freeport, Ill., is now completed.

Williams & Melvin are carrying on a good grain business at Bloomington, Ill.

The Interstate Grain Company has opened a new elevator at Alma City, Minn.

Thistlewaite, Smith & Co. is a new and thriving grain firm at Sheridan, Iowa.

Rahr Bros' malt house and elevator at Manitowoc, Wis., are nearing completion.

H. O. Walseth has embarked in the grain commission business at Superior, Wis.

Heath & Emerson of Rowan, Iowa, have erected a grain warehouse at Alexander.

The Gee Grain Company of Minneapolis will open a branch office at Duluth, Minn.

A large addition is being built to Greenleaf & Baker's elevator at Atchison, Kan.

The Dick Bros. Brewing Company of Quincy, Ill., will erect a \$50,000 brew house.

Asa Griffin's grain warehouse at Earlville, Ill., has received a patent asbestos roof.

R. J. Hand is contemplating the erection of a cotton seed oil mill at Muldoon, Texas.

The Marshall Elevator at Oakes, N. D., has started up with J. H. Coulter in charge.

F. H. Minch & Son have succeeded B. M. Minch & Co., grain dealers at Paoli, Wis.

There is a project on foot for the erection of a brewery at Kamloops, Manitoba.

Williams & Jamison is the style of a new firm of grain dealers at Brookings, S. D.

Theo. Brooks' flat warehouse at Englewood, Ill., is being converted into an elevator.

W. V. Sindt is overhauling his elevator at Holstein, Iowa, making ready for business.

George C. Bagley's elevator at Cathay, N. D., is being erected by Barnett & Record.

Cook & Strand have commenced a grain and commission business at Superior, Wis.

W. S. Garretson, grain merchant at Girard, Ill., is now buying grain at Nilwood also.

Beede, Northey & Co.'s elevator at Hampton, Iowa, has been purchased by F. C. Howe.

The O'Neill Grain Company of Winona, Minn., is erecting an elevator at Pine Island.

The Terminal Warehouse Company of Baltimore, Md., has opened its new warehouse.

C. L. Ward is superintending repairs to the elevators at Frederick and Ashton, N. D.

Burglars broke into G. W. White's elevator at Fairfield, Iowa, and robbed the till of \$4.

It is rumored that a large brewery will be erected at Shamokin, Pa., at a cost of \$150,000.

The C. Kern Brewing Company of Port Huron, Mich., intend to erect a new brewery.

The Brooklyn (Iowa) Elevator is selling wheat for feed to farmers at 57 cents per bushel.

Andrews & Gage of Minneapolis have begun work on their new elevator at Hatton, N. D.

A. R. T. Dent and C. G. McNeil have organized the Dent Grain Company at Le Mars, Iowa.

M. E. Hay, general merchant at Wilbur, Wash., is erecting a three-story grain warehouse.

The Great Western Elevator Company is building a 25,000-bushel elevator at Belview, Minn.

I. H. Harris is building a large warehouse at Bathgate, N. D., and will handle buckwheat.

The Ph. H. Postel Milling Company has its new elevator at Mascoutah, Ill., in operation.

Geo. H. Pfaff has completed a 10,000-bushel addition to his elevator at Port Huron, Mich.

The Whallon Elevator Company of Ashton, S. D., has completed the repairs to its elevators.

Bernheimer & Schmid, New York brewers, are going to erect large mill and storage houses.

The Simpson-Robinson Company have completed the O'Neill Elevator at South Chicago, Ill.

James Stewart & Co. have just successfully completed the Ryan Elevator in St. Louis, Mo.

The Empire Elevator at Ellendale, N. D., has resumed business. W. I. Storm is running it.

Vollkommer, Bloomington & Co., hay and produce dealers at Chicago, Ill., have dissolved partnership,

Joseph Volkommer retiring and C. A. and W. C. Bloomingdale carrying on the business.

The Winona Mill Company is remodeling its flat warehouse at White, S. D., into an elevator.

The Sleepy Eye Milling Company has closed its coal and grain houses at St. Lawrence, S. D.

The repairs and improvements to the Santa Fe Elevator at Atchison, Kan., are now completed.

P. A. Buchman has purchased the grain warehouse at Carrothers, Ohio, and has begun business.

Abner Wiseman has bought the grain elevator at Clyde, Wash., and will have a good business.

P. D. Armour denies the report that his company intended to erect another elevator at Chicago.

The Kuebler Brewing and Malting Company will build a new storage house at Sandusky, Ohio.

Blass & Chapin, grain commission dealers at Toledo, Ohio, have been succeeded by Blass & Co.

M. A. Sprague has succeeded to the grain and lumber business of W. H. Muffley at Osage, Iowa.

The John E. Hall Commission Company of New Orleans, La., have succeeded Goddard & Hall.

A company with a capital of \$50,000 has been organized to erect a brewery at Lawrence, Mass.

Lamer, Higginson & Co., hay and grain dealers at Montreal, Canada, have dissolved partnership.

West & Carroll, grain, coal and lumber dealers at Gothenburg, Neb., have dissolved partnership.

B. C. Ragan has succeeded Charles Raymond in the grain and elevator business at Exeter, Neb.

The N. L. Morris Commission Company of St. Paul has established branch offices at Superior, Wis.

George F. Gerlach is having a new hopper scale put up at his grain warehouse at Crown Point, Ind.

Utter & Graves, dealers in grain, flour, etc., at Trempealeau, Wis., have dissolved partnership.

J. E. Ludy, formerly a wheat buyer at Harrington, Wash., will enter the business again this season.

Wm. Ritter intends to erect a new brewing and storage house at Chicopee, Mass., to cost \$25,000.

H. W. Bonne, a Spokane capitalist, is erecting 50,000-bushel grain warehouse at Sprague, Wash.

Darius Allen has leased H. A. Hoover's elevator at Smith, Mich. He looks for an extensive business.

The Waterville Produce and Commission Company will build a grain warehouse at Waterville, Wash.

The Eagle Cotton Oil Company has been organized at Meridian, Miss., with a capital stock of \$50,000.

Kelley & Tripp have sold their elevator at Northfield, Minn., to E. M. Walbridge and T. E. Watson.

The new 30,000-bushel elevator at Langdon, N. D., is nearing completion and will soon be in operation.

Wills & Evans of Girard, Ill., write us that they have purchased the Farmers' Elevator at that place.

F. H. Trowbridge, dealer in grain, feed and coal at Neligh, Neb., has closed out his grain and coal stock.

Anderson Bros' elevator at Vincent, Iowa, is receiving extensive repairs, including a new foundation.

M. Strain's new seed cleaning house at Lamar, Colo., is now completed and the machinery installed.

The Excelsior Brewing Company has been organized with a capital stock of \$100,000 at Philadelphia, Pa.

The elevator at Mosca, Colo., is now completed. It is 100 feet high and has a capacity of 100,000 bushels.

Brit Hart has leased J. W. Blayney's elevator at Washington, Pa., and engaged in the grain business.

The new elevator erected by How, Hillsdale & Dean at Sauk Center, Minn., is doing a crowding business.

William Chambers & Co., grain dealers at Pullman, Wash., have been succeeded by Chambers, Price & Co.

J. H. Morrill of Hustler, Ohio, has gone into the grain and lumber business and has erected an elevator.

The Daniel Crawford Distillery Company has been incorporated at Chicago, with a capital stock of \$25,000.

The Northwestern Grain and Commission Company have opened offices in the Board of Trade at Superior, Wis.

T. McMichael's grain warehouse at Bryant, S. D., is now working and is under the charge of Fred Trousedale.

The Big Four road is laying two miles of side track at Sheldon, Ill., for the accommodation of grain shippers.

A Superior, Wis., paper says that the large reduction in charges for grain storage in local elevators is already having a beneficial effect on the grain business.

ness there. Superior elevators will have all the wheat they can handle during the coming winter.

Zeches Bros. & Ross, grain and coal dealers at Claremont, Minn., have been succeeded by Parsons Bros.

Albert A. Armitage has leased A. F. Beardsley's elevator at Buckingham, Ill., and will "scoop" no more.

G. W. White, the elevator man of Fairfield, Iowa, is making large sales of wheat to farmers for feed for stock.

The Omaha Elevator Company's elevator at Overton, Neb., has been closed on account of the failure of crops.

Follett Bros'. new grain warehouse at Sherburn, Minn., is now in operation. Fred Gardner is the buyer.

A granary will be erected on the poor farm at Lake Benton, Minn.; the contract will be awarded September 18.

The Kansas City Hay Press Company intend to erect two warehouses at Kansas City at a total cost of \$6,000.

The Lamberton Elevator Company will rebuild their elevator at Simpson, Minn., which burned recently.

Paul Henkels is operating the Archer & Howe Elevator at Orange City, Iowa, Herman Raterink having charge.

The Wm. J. Kemp Brewing Company of St. Louis, Mo., are to erect warehouse and other buildings shortly.

McCormick & Eustice are enlarging their grain house at Cuba City, Ill., and preparing for an increased business.

The new elevator at Dodge Center, Minn., is in charge of Frank Ballard, who is working up a good business.

Alba Holmes is erecting a starch factory at Caribou, Maine, to take the place of the one destroyed by fire recently.

Thomas Hynson of New Orleans is interested in the cottonseed oil mill which is contemplated for Alexandria, La.

A. H. Richner is placing a new hopper scale and a feed mill in Ross Bros. & Co.'s elevator at Crawfordsville, Ind.

The Bourbon Elevator Company of Bourbon, Ind., are going into the milling business, and are now erecting a mill.

The Barnett & Record Company have the contract for the erection of G. C. Bagley's elevator at Fessenden, N. D.

C. J. Greischar has sold out his grain and hay business at Kansas City, Mo. Failing health necessitated a removal.

The California Land and Stock Company intends building a 25,000-bushel grain warehouse at Harrington, Wash.

H. A. Jackson has leased the Sunderman Elevator at Amanda, Ohio, and placed it in charge of William Thompson.

The Cheatham-Tidmarsh Company, grain dealers of Tacoma, Wash., have dissolved, A. W. Tidmarsh continuing.

P. Haggart is overhauling his grain warehouse at Blenheim, Ontario, and placing cleaning and grading machinery.

The Minneapolis & Northern Elevator at Milton, N. D., will not be operated this season on account of the short crops.

The Mills Commission Company has been organized to do a grain and general commission business at Kansas City, Mo.

The Farmers' Elevator at Kensington, Minn., is now doing business. P. G. Peterson has been engaged as grader.

The Purcell & Kuhns Grain Company of Kansas City, Mo., has been dissolved, C. V. Purcell continuing the business.

The Northern Elevator Company will erect an elevator at Winnipeg, Manitoba, to replace the one burned recently.

John H. Willard's linseed oil mill at Mankato, Minn., which has been closed since last fall, has again been put in operation.

O'Connors & Graudy, dealers in hardware at Crystal, N. D., have purchased Brooks Bros'. elevator and will deal in grain.

William Caldwell, grain dealer at Lodi, Wis., has repaired his elevator and formed a partnership with William Caldwell.

The J. A. Smith estate has disposed of its elevator property as follows: One-half interest in the grain warehouse at Hastings, to D. L. Thompson; one-half

interest in the Hampton house, to B. Steffen, and the elevator at Vermillion to E. N. Wallerius, all in Minnesota.

The Magill Elevator at Fargo, N. D., is rapidly approaching completion. It will have the latest improved machinery.

The Green Tree Brewery Company of St. Louis, Mo., has a large elevator, brew house and boiler house under construction.

The Kirkbride-Palmer Grain Company of Minneapolis has opened a branch at Duluth with F. G. Williams in charge.

The Farmers' Elevator Company at Winnipeg, Manitoba, reports a profit of \$800 on its business during the past season.

Stewart, Moeller & Co. of Reinbeck, Iowa, are buying grain at Estherville, Sibley, Little Rock, Graettinger and Superior.

A 5,000-bushel elevator is being erected at Oneida, N. Y., for the Oneida Roller Mills Company. It will be 30x30 feet in size.

The Cheatham-Baker Company has arranged to buy grain for C. M. Hooper and R. W. Galbraith at Johnson, Wash., this fall.

The Depew Brewing Company has been organized at Depew, N. Y., with a capital stock of \$30,000, and will erect an elevator.

McCaull, Webster & Co. have purchased a 20,000-bushel elevator at Aberdeen, S. D., where their house burned some time ago.

Paige & Whitaker, grain commission men at Duluth, Minn., have been succeeded by Paige & Horton, Mr. Whitaker retiring.

The Farmers' Elevator Company, recently organized at Altona, Assinaboine, has been incorporated with a capital stock of \$5,000.

A grain elevator and coal yard is being constructed at Center Hall by Mr. Colyer. D. B. Brisbin will have charge of the business.

The Metcalf-McDonald Company are rushing the work on the Frazier Elevator at South Chicago, Ill., working night and day.

The Seymour Elevator at Kenton, Ohio, which burned recently, will be rebuilt at once. Contractor Foster has the contract.

The Graden Mercantile Company of Durango, Colo., has begun the erection of its 30,000-bushel elevator adjoining the flour mill.

F. N. Isham is building an addition to his elevator at Avon, N. Y., which will increase the storage capacity by 50,000 bushels.

Insurance companies are revising their Western elevator and flour mill lines because of the failure of the crops in certain sections.

Jennison Bros. & Co. have purchased the Porter Milling Company's elevator at Winona, Minn. M. J. Ryan will superintend it.

The Pacific Coast Elevator has built an addition to the elevator at Pendleton, Ore., in the way of a platform for handling barley.

Henry Heintz has reopened his elevator at Elkton, S. D. It has been closed for some time, and has received a good overhauling.

A \$50,000 malt house and elevator will be erected at Buffalo, N. Y., by the Chas. G. Curtiss estate. Lechner & Son are the builders.

The Van Dusen Elevator at Rochester, Minn., has put in a new steam power shovel having a capacity of 700 bushels per 20 minutes.

W. M. Briggs & Son have exchanged their general stock for the flour mill and elevator owned by D. D. Harris at Shelbyville, Mich.

The Winona Mill Company intends to erect a terminal elevator at Winona, Minn., to be run in connection with its country houses.

H. R. Gass, F. P. Platt and others at Flint, Mich., are said to be perfecting plans for constructing a grain elevator at Mobile, Ala.

An "oldest inhabitant" of Sherman, N. Y., says he never saw the like of it—the large amount of wheat being ground and fed to stock.

Weber Bros., grain dealers at Wayne, Neb., have built an addition to their grain warehouse, increasing the capacity to 10,000 bushels.

The H. J. O'Neill Grain Company has improved its elevator at Stockton, Minn., and added a gasoline engine. S. T. Gwinn has charge.

Hutton & Haddon, grain and machinery dealers at Edmonton, Alberta, have dissolved partnership, G. Hutton continuing the business.

At a recent meeting of the Duluth Elevator Company at Duluth, Minn., the company was organized under the laws of the state of Wisconsin and the name changed to the Globe Elevator Company. The

new officers are: Edward Peavey, president; G. L. Brooks, vice-president; S. A. Harris, secretary and treasurer, all of Minneapolis.

W. O. Dodge & Co. of Minneapolis intend to open a branch grain and commission office at the head of the lakes, at either Superior or Duluth.

The Farmers' Warehouse Company of Walla Walla, Wash., is said to be doing a good business handling a large amount of the farmers' grain.

A 150,000-bushel grain warehouse is being built on J. F. Hill's ranch near Pullman, Wash. T. W. Busbey will operate the new house.

The West Superior Elevator Company has leased the Alliance Elevator at Valley City, N. D., and placed W. H. McPherson in charge.

The Phoenix Hay and Grain Company of Phoenix, Ariz., has a hay baling outfit which is sent out to press hay in the surrounding country.

Two elevators and one warehouse will handle wheat at Hecla, S. D., this fall. Smith & Boundey, L. Bean and M. S. Mather are the buyers.

It is reported that the St. Paul and Kansas City Grain Company's elevators at Arthur and Odebolt, Iowa, will be shut down for the season.

E. E. Highman and C. T. Johnson have formed a company to carry on a grain business at Mt. Vernon, Ind. Mr. Johnson is an old grain man.

A 32x32-foot addition is being built to the elevator owned by W. A. Coombs, and operated in connection with his flour mills at Coldwater, Mich.

The Osborn & McMillan Elevator Company of Minneapolis is converting its flat houses on the Soo line into elevators with latest improvements.

The Monarch Elevator plant at Minneapolis, Minn., is now doing business. It has a total capacity of 1,200,000 bushels. J. C. Higgins has charge.

The necessary funds for the farmers' elevator at Minneiska, Minn., have been collected at last and work on the structure will soon commence.

The Seckner Contracting Company, builders of elevators of Chicago, have been awarded the contract for the new power station at Harlem, N. Y.

Railsback Bros. & Spelt, grain dealers at Lincoln, Neb., have been succeeded by Railsback Bros., who will carry on the business at Ashland, Neb.

The farmers' warehouse at Mapleton, Minn., has been overhauled and improved generally, a 3½-horse power gasoline engine supplying the power.

Lewis & Fatic, grain men at Greenfield, Ind., are doing a good business. They recently bought and handled 40,000 bushels of grain in one month.

Rettig & Son of Pottsville, Pa., are about to erect a large brewery and milling house. It will contain all the modern appliances of a 25,000-barrel plant.

C. R. McCurtie has opened a grain office at Eldora, Iowa., with a branch at Owasa. He was formerly with Phelps, Waterhouse & Milligan at Eldora.

Arbuckle Bros. of New York bought from the receiver of the Lone Star Elevator Company the 1,000,000-bushel elevator at Dallas, Texas, for \$25,000.

W. S. and E. N. Kinnear of Sprague, Pa., are erecting a series of elevators along the line of the Great Northern, and will engage in the grain business.

W. B. Newbegin of Blue Mound, Ill., is erecting a new brick grain office and elevator on the site of his old structures, and will build up a good business.

It is claimed that the Atlas Distillery to be erected at Peoria, Ill., will be the largest of its kind. It will have a capacity of 8,000 bushels of grain per day.

The new grain warehouse at Dallas, Ore., is working well under the management of Frank Woods and Charles Baker. Gus Bassett has leased the house.

Keith & Co. of Chicago intend erecting a 1,000,000-bushel annex to their elevator on Halsted street. It will cost \$100,000, and work will commence at once.

Western commission firms are getting apprehensive over the shortage of the corn and oat crop. Some express fear that their business will be seriously affected.

The farmers' elevator at Moosomin, Manitoba, has been leased by Brigham & James. They were formerly connected with the milling firm of Smith & Brigham.

C. J. Miller & Co.'s elevator at Swartz Creek, Mich., has been supplied with a receiving separator and gas engine. F. L. Bishop, millwright, superintended the work.

John Cuthbertson and John Q. Hirschelman are about to begin the erection of an elevator at St. Lawrence, S. D. The contract will be awarded September 15.

Geo. W. McNear, the California grain merchant, was recently assessed \$1,850 by an English court. He chartered the bark Scottish Wizard in May, 1893, and sent her to Liverpool with 5,151 centals of barley, 7,719 centals of wheat and other goods, including 779,-

910 pounds of copra oil from the dried meat of the coconut. The copra damaged the barley and the consignees sued for \$3,745 damages.

The Prinz & Rau Manufacturing Company, Milwaukee, Wis., has sold a large sized barley grader to the Pacific Coast Elevator Company of Portland, Ore.

C. H. Gates & Co. intend to buy wheat at Harrington, Edwall and Moscow, Wash., and are building platforms at those places and making other arrangements.

The Savauna Elevator Company of Minneapolis has been incorporated with a capital stock of \$25,000. Incorporators: J. Q. Adams, J. W. Adams and E. W. Folsom.

Parks & Sullivan, formerly conducting a feed and commission business at Santa Barbara, Cal., have dissolved partnership, W. S. Parks continuing the business.

The Milwaukee (Wis.) Grain and Malt Company's Elevator "A" is being rebuilt, having new machinery placed, provided with a slate roof and corrugated iron siding.

Adams & Abrams have been awarded the contract for erecting the farmers' elevator at Winona, Minn. The cost will be \$2,200, and work has already been commenced.

G. W. Post, grain dealer at Lehigh, Iowa, has sold out his stock of corn to farmers. Iowa has made history "going dry," but she has beaten the record this summer.

The farmers' elevator at Alpena, S. D., has been leased by W. B. Hatch and G. W. Corkings. As the wheat crop was limited, the farmers decided not to run the house.

Some unscrupulous person has a liking for the name of the Northern Grain Company of Ashland, Wis., to which numerous forged checks bear substantial testimony.

The Burlington road has closed its stations at three towns in Nebraska on account of the failure of the corn crop. The towns thus served are Cheney, Farwell and Elyria.

The Morrison Grain and Lumber Company has secured the Finch & Hayward Elevator at Bode, Iowa. The company will deal in coal also. G. B. Rait is manager.

C. H. Oates & Co. are building grain warehouses of 30,000 to 50,000 bushels' capacity at Edwall, Moscow, Harrington and Coal Creek, Wash., with headquarters at Harrington.

Pending the settlement of some difficulty with the Northern Pacific Railroad regarding an elevator site, L. I. Langness has stopped work on his elevator at Fergus Falls, Minn.

The Kanawha Coal and Coke Company have begun the erection of a coal elevator at Cincinnati, Ohio, which will have a bin capacity of about 15,000 bushels and cost \$10,000.

The power canal and irrigating ditch at Edgemont, S. D., is now completed. It is expected to bring prosperity to a large farming community, and grain buyers ought to prosper.

James Stewart & Co., the St. Louis contractors and elevator builders, have been awarded the contract for the 200,000-bushel addition to the Crescent Elevator at East St. Louis, Ill.

The Des Moines (Iowa) Elevator Company has been incorporated with a capital stock of \$30,000. Directors: C. F. McCarty, L. Mott, B. A. Lockwood, M. McFarlin and Lee Lockwood.

Johnson & Recor's elevator at Port Huron, Mich., is about completed. It will have four hopper bottomed bins holding a carload, and two storage bins with a capacity of 2,500 bushels each.

A Minneapolis elevator man recently shipped two cars of second bakers flour to Iowa to be sold for feed. At first Red Dog was bought, but that product getting too high bakers was resorted to.

W. A. Thompson & Co. is the style of a new grain firm at Louisville, Ky. Mr. Thompson was formerly identified with Bullitt & Co., and is one of the best known grain buyers of Kentucky.

The Sawyer Grain Company of Minneapolis intends to conduct a feed department in connection with its other business. The company recently succeeded A. J. Sawyer & Co. in the grain business.

Tromanhauser Bros. of Minneapolis, Minn., have been awarded the contract for building the elevator at Red Wing, Minn. It will be 48x50 feet, 95 feet high, and have a capacity of 80,000 bushels.

P. H. Graves, the grain merchant at Seneca, Ill., who recently made an assignment, has placed his liabilities at \$103,800, and his assets at \$52,716. A number of farmers lost heavily by the failure.

James Douvan, William St. Clair and Charles Waters were arrested recently for carrying on a bogus commission house at Milwaukee, Wis. Under the name of "John D. Robison & Co." the trio did a

prosperous business of six weeks' duration. They thrived on the gullibility of Wisconsin, Minnesota and Iowa farmers, and Milwaukee millers are said to have bitten generously.

Devitt, Beaudrias & Co., wholesale commission merchants and dealers in hay, straw, etc., at New York City, have dissolved partnership. John J. Devitt and Alphonse J. Beaudrias succeeding to the business.

At the annual meeting of the Empire Elevator Company at Minneapolis the old officers were re-elected as follows: C. A. Pillsbury, president; G. W. Porter, vice-president and treasurer; J. R. Guthrie, secretary.

L. B. Coman has arranged with Omaha parties to reopen the Hawkeye Commission Company's quarters at Fremont, Neb., and continue in the grain commission business. And the suckers will flock in as before.

Notes for \$275,235 given by stockholders of the Northern Pacific Elevator Company at St. Paul, Minn., have been declared invalid as constituting liens on the proceeds of the sale of the company's assets.

Farmers near Logan, Utah, are considering plans for storing wheat and awaiting high prices, for which purpose they may build an elevator. They want to increase the profits on 100,000 bushels of wheat by \$20,000.

George Ellwood of Gladbrook, Iowa, is receiving wheat from Kansas City and selling to farmers at 55 cents per bushel for hog feed. A bushel of wheat is said to equal in feeding value one and one-half bushels of corn.

J. A. Kugelmann, Francisco Vasquez and Adolfo Casola have formed a partnership under the firm name of Kugelmann & Co. for the purpose of conducting a commission and grain exporting business at Baltimore, Md.

The Brokerage Commission and Elevator Company has been organized at Augusta, Ga., with a capital stock of \$100,000. The company has leased an elevator and warehouse and will start in business immediately.

Canadians are learning not to put their trust and money in bogus commission firms. Wilson Bros., grain and hay "merchants," were cruelly starved out at Montreal recently, and had to leave town from lack of business.

Dakota farmers have organized a company, with a capital stock of \$200,000, to erect a large elevator at Superior, Wis. It is thought 5,000 Dakota farmers will go into the scheme—on the principle of the more the merrier.

Fire threatened the Star Elevator at Minneapolis, Minn., some time ago, but met successful resistance at the hands of 23 of the employees. As a mark of appreciation the Star Elevator Company distributed \$1,000 among them.

At a recent meeting of the Northern Grain Company at Ashland, Wis., the capital stock was increased to \$275,000, and officers elected as follows: O. W. Mosher, president; J. G. Martin, vice-president; R. L. McCormick, secretary.

Perry, Benton & Anheier is the name of a new grain commission firm with headquarters at Superior, Wis., and offices at Duluth and Minneapolis. The firm is composed of well-known men of business enterprise and they expect a good trade.

It is reported that the Northern Pacific Railroad Company are contemplating the erection of a large elevator at Superior, Wis. The company came to this determination on account of the reduction in elevator charges at the head of the lakes.

At the annual meeting of the Minnesota & Dakota Elevator Company at Minneapolis the following officers were elected: Charles E. French, president; E. R. Barber, vice-president; William Pettit, secretary, and T. B. Murray, treasurer and manager.

The Thompson Milling Company of Wabash, Ind., is erecting a cupola 28 feet long on its grain warehouse. In the spring the interior of the warehouse will be torn out, the double elevators placed in the cupola and new bins built throughout.

Allen & Trelevan, grain and feed dealers at Fond du Lac, Wis., have purchased the Rosenberg Elevator. The building has been moved and additions about completed. The building is 80x24 feet. The elevator will be fireproof and well equipped.

The new terminal elevator at St. Louis, Mo., was opened with considerable eclat on September 8. Handsome invitations were sent out. The officers of the company are F. H. Ryan, president; John Thyson, vice-president; J. F. Ryan, secretary.

The manager of one of the largest elevator systems in the Northwest said recently: "We are not hedging against our purchases of cash wheat. The quality is unusually fine and prices in the Northwest are higher than at Chicago, so that there is little or no prospect of any wheat being brought to Chicago, as the milling and foreign demand will take all the sur-

plus. The mills are selling their feed at about \$2 per ton more than flour, and are using five bushels of wheat to the barrel of flour, and running more into bran and middlings than usual, owing to the unprecedented demand for feed."

As the Northern Pacific Railroad declined to agree to the same rates on grain as the Great Northern reducing or entirely absorbing the switching and transferring charges, the plans for the big elevator at Seattle are off until some agreement is reached.

Receiver George B. Nicoll of the Seattle (Wash.) Terminal Railway and Elevator Company has been authorized to issue \$4,800 receiver's certificates to pay taxes, insurance, employees' wages and put the property in condition for handling this year's grain crop.

The Northwestern Elevator Company has been incorporated at Oswego, N. Y., for elevating and storing grain and for storing merchandise and other property in Oswego. Capital \$60,000; directors, Theodore Erwin, George B. Sloan, Robert Downey and Dudley M. Irwin of Oswego.

The Producers' Warehouse Company of Walla Walla, Wash., has been incorporated by W. H. Babcock, J. G. Coulter, J. L. Killian, C. J. Kershaw and J. L. Sharpstein; capital stock \$25,000. The company will lease the system of elevators on the Washington & Columbia River Railway.

Marquette has got the finest, best arranged and most convenient elevator in Nebraska. W. A. Tarbell has expended \$5,000 in refitting the old mill into an elevator with all modern improvements, and it is a dandy. It has 25,000 bushels' capacity and was built by J. A. West.—*Aurora (Neb.) Sun*.

The St. Anthony and Dakota Elevator Company, which recently purchased the line of country houses operated by the Red River Valley Elevator Company, has amended its articles of incorporation, increasing its capital stock from \$300,000 to \$600,000, and raising the limit of indebtedness to \$2,000,000.

The Saginaw Milling Company at Saginaw, Mich., have completed a warehouse which will be used exclusively for baling hay. The building is 100x22 feet, and affords a storage capacity for several hundred tons of baled hay. A hay press has been placed in position and is attached to the main building.

At elevators along the line of the Northern Pacific and at Duluth and West Superior the handling charges on receiving, elevating and discharging grain have been reduced, including 15 days' free storage and one-half cent per bushel after that time. There will be no charge for cleaning and blowing except on flax.

Geo. A. Fisher, a member of the grain commission firm of Wm. H. Epply & Co. of Chicago, has brought suit against the company, praying for a dissolution of partnership, accounting and injunction. Complainant alleges that Epply has been appropriating funds of the company and giving him the worst of it generally.

The damaged oats remaining from the burned Great Northern Elevator at Winnipeg has had a rousing sale. The grain was sold at from 5 to 15 cents per bushel, and in three days it was about all taken. So great was the rush for the grain that it was difficult to keep a passage open in the streets near the elevator.

The Barnum Grain Company has been incorporated at Duluth, Minn., with a capital stock of \$50,000. The incorporators are W. H. Dunwoody, J. S. Bell, C. J. Martin and P. B. Smith of Minneapolis, Minn., and G. G. Barnum of Duluth. W. H. Dunwoody is president, J. S. Bell, vice-president, and G. G. Barnum, secretary and treasurer.

At the annual meeting of the Osborne-McMillan Elevator Company of Minneapolis, the following officers were elected: J. D. McMillan, president; R. E. Osborne, vice-president; E. E. Osborne, secretary and treasurer. The secretary reported that the company's Shoreham Elevator at Minneapolis was completed and that the capacity was 750,000 bushels.

'Tis true, 'tis pity; pity 'tis, 'tis true—that the Seattle Warehouse and Shipping Company should have to go to blizen on account of the perversity of the Northern Pacific in regard to the switching and transfer rates. Everything was going along as nice as sorghum, and the company was about to commence the erection of a large grain warehouse, when the Northern Pacific said it could not pay the switching fee of \$2 per car, whereupon some of the stockholders of the company got mad.

According to a London paper the liquidator of the Chicago Grain Elevators, Limited, has asked the court to sanction a scheme of arrangement between the company and the holders of an issue of £500,000 first mortgage debentures. In 1889 the company was incorporated to carry on the business of grain warehousemen and merchants and owners of elevators in America, England and elsewhere, and to acquire the property and rights of the Munger & Wheeler Elevator Company of Chicago. The capital was £450,000. The scheme includes the organization of a new com-

pany under the laws of New York or New Jersey with a capital of \$2,500,000. It is said that the scheme will be sanctioned.

The Railroad and Warehouse Commission at St. Paul has made the following changes in handling and storing grain at public country elevators: Maximum charges for receiving grain, insuring, handling and storing same 15 days and delivering shall be 2 cents per bushel. Storage charges after first 15 days, $\frac{1}{2}$ cent per bushel for each 15 days or part thereof for first three months; for storage after first three months charges shall not exceed $\frac{1}{2}$ cent per bushel for 30 days or part thereof. Storage charges per year will by this action of the commission be reduced $2\frac{1}{2}$ cents per bushel.

In the case of the Minneapolis, St. Paul & Sault Ste. Marie Railroad vs. the Fireman's Insurance Company tried at Minneapolis, recently, decision was rendered to the effect that the Soo road was entitled to recover from the insurance company the sum of \$7,500 with interest at 7 per cent. from March 23, 1892. On Oct. 6, 1891, the Soo road took a \$7,500 policy on grain stored at Gladstone. Nov. 29, 1891, the elevator was burned and the grain destroyed and damaged to the extent of \$60,658. Some of the grain in the elevator at the time belonged to other parties, so that the loss to the Soo road was \$56,777, covered by insurance in other companies.

C. H. McCarthy has brought suit against the Indianapolis Commission Company to recover certain sums of money which he claims on transactions through that firm. McCarthy sold defendant 1,000 bushels of No. 2 spring wheat at 55 cents, which the company agreed under contract to receive any time in July, also agreeing to purchase the same amount for July delivery, and place the same against sale for the purpose of liquidating the transaction and to pay the difference, if any. Previous to giving notice to purchase McCarthy deposited his margin of \$45 with the company. Subsequent to McCarthy's notice to purchase the commission company could have bought No. 2 spring for 50 cents but failed to do so, and plaintiff wants to know what became of his money.

The rumor has gone abroad that a certain grain firm at Superior, Wis., is soliciting shipments of grain through North Dakota, and as an inducement to farmers is offering to store their wheat free for as long time as they want to store it, and it is said that in one case the local agent of the Great Northern is urging farmers to ship to this particular firm. The question arises, is some elevator discriminating in favor of some particular firm, or is this firm simply lying to farmers, and does it sell the farmers' wheat on arrival and use the proceeds until the farmer orders it sold? Either the Superior or the Duluth Board of Trade should look into the matter, and will do so if anything like specific charges are made.

At a meeting of the Lake Superior Elevator Company and the Union Improvement Elevator Company at Duluth September 7 the principal stockholders organized as the Consolidated Elevator Company. This company will acquire the property of the former companies and assume control in about thirty days. It is now in the hands of strong parties, as the names of those comprising the board of directors would indicate. Mr. Forbes will be president and general manager. The receivership will be closed up in about one month. Following are the directors: George Ripley, Theophilus King, Boston; Forrest H. Parker, George B. Cooksey, New York; Clarence H. Clark, Philadelphia; Charles A. Mair, Chicago; T. B. Cascy, Minneapolis; George Spencer, M. J. Forbes, Duluth.

A new grain transfer elevator is to be erected at Savanna, Ill., by the St. Paul & Kansas City Grain Company of Minneapolis. The location of the plant will be on the C. & M. & St. P. company's grounds, just south of the city pump house, on Main street. The elevator will be 36x48 on the ground and 75 feet high. Aside from the main building will be a power house 28x30. A 1,200-bushel hopper scale and a railroad track scale will also be added. The elevator will be used for cleaning and storing grain, with a capacity of 35,000 bushels. The buildings will be equipped with the best possible machinery, especially adapted for the rapid handling of grain. The plans have been drawn with great care. The owners will put in the best of everything and expect to do an extensive business.

An important decision regarding wheat margins has recently been rendered by the Supreme Court of North Dakota in the case of David Dows & Co. vs. Samuel Glaspell. Some years ago Glaspell shipped wheat to Dows & Co., who were doing a grain and commission business at Duluth, to be sold for him, and shortly afterward instructed them to buy 10,000 bushels of May wheat. Glaspell failed to make good his margins by the following June and Dows & Co. brought suit to recover \$7,500, the alleged sum that Glaspell owed them. Glaspell admitted his transactions, but from the fact that they were gambling transactions denied owing Dows & Co. anything, and asked for judgment of \$11,000 for money previously paid Dows & Co. on margins. The court's decision was in favor of Glaspell, the plaintiff's action being dismissed, and in favor of the plaintiff on Glaspell's counter claim.

LATE PATENTS

Issued on August 14, 1894.

BALING PRESS.—Andrew C. Miller, Commerce, Mo., assignor to one-half to Edward A. Johnson, same place. No. 524,597. Serial No. 491,989. Filed Nov. 25, 1893.

FRICTION CLUTCH.—William D. Ewert, Chicago, Ill., assignor to the Link Belt Machinery Company, same place. No. 524,585. Serial No. 471,731. Filed April 25, 1893.

HAY PRESS.—Samuel Etehison, Weiner, Ark. No. 524,634. Serial No. 508,484. Filed April 21, 1894.

Issued on August 21, 1894.

CONVEYOR.—Charles S. Schenck, New York, N. Y. No. 524,842. Serial No. 515,894. Filed April 11, 1893.

SWIVEL SPOUT FOR ELEVATORS.—Dighton A. Robinson, Minneapolis, Minn. No. 524,984. Serial No. 489,548. Filed Oct. 30, 1893.

HAY PRESS.—James A. Stokely, Kansas City, Mo. No. 524,771. Serial No. 497,371. Filed Jan. 19, 1894.

Issued on August 28, 1894.

BALING PRESS.—Robert H. Gray, Lexington, Ky. No. 525,203. Serial No. 509,138. Filed April 26, 1894.

GRAIN SEPARATOR.—Hezekiah Bailey and William L. Gilson, Sheridan, Ore. No. 525,067. Serial No. 485,765. Filed Sept. 19, 1893.

GRAIN WEIGHING MACHINE.—Isaiah G. Jones, Vincentown, N. J. No. 525,080. Serial No. 487,840. Filed Oct. 11, 1893.

Issued on September 4, 1894.

GAS ENGINE.—Wm. W. Grant, Brooklyn, N. Y. No. 525,651. Serial No. 501,398. Filed Feb. 24, 1894.

GAS ENGINE.—Fred C. Olin, Dunkirk, N. Y. No. 525,358. Serial No. 444,215. Filed Aug. 26, 1892.

ITEMS FROM ABROAD

Argentina exported in June 167,116 tons of wheat, 1,673 tons of maize, 11,526 tons of linseed, and 3,105 tons of hay.

Russia has rescinded the prohibition against the importation of Persian silver corn into the Caucasus and Central Asia.

As was announced, the annual International Grain Fair opened at Vienna August 27. Official crop estimates and conditions were reported.

The principal grain crop of Prussia is rye. Over 4,000,000 hectares were raised last year, being twice as much as of oats and four times as much as of wheat.

During the seven months ending July 31 the United Kingdom imported 199,680 tons of hay. During the month of July the importations amounted to 14,900 tons.

A correspondent in Madrid writes that in consequence of the new American tariff the maximum duty will be applied to all imports from the United States.

China has prohibited the exportation of any grain. The American and Norwegian consuls recently refused clearances to two vessels laden with rice at Shanghai.

A dispatch from Paris says that the new corn duty has not produced the expected results; in fact, the warmest partisans are confessing that it was a mistake to impose it.

The millers of the Province of Buenos Ayres have decided to forward a petition to the national government asking that steps be taken to obtain a reduction on the flour dues at present in force in Brazil.

A bill was recently introduced in the Belgian Chamber of Deputies, which, while recognizing as legitimate sales for future delivery, contains clauses drawn up with the object of suppressing transactions when the actual delivery of goods is not contemplated.

Maize is in great demand in South Russia, according to Odessa reports, the crop being deficient in Southwestern Russia. The same is reported of Argentina, which would make it appear that this is not a good year for maize, the world over. The crop is less important in other countries than in this, but a

shortage of 100,000,000 bushels even would require the deficiency to be made good from something else.

Poor little Cuba! The United States has imposed a tax of 40 per cent. on her chief export—sugar, and by way of retaliation Spain is expected to impose enhanced duties on her chief import—grain. In return for our tax on her sugar Cuba will buy highly taxed Spanish flour.

The United States Consul at Zurich, Switzerland, has forwarded to the state department a report on the Hungarian crops. Wheat, he says, is of a superior quality, but from 15 to 20 per cent. less in quantity than last year's yield, or 138,000,000 bushels. A short crop of rye and about one-third of an average crop of corn are also reported.

A dispatch from Buenos Ayres dated July 21 says that it is now doubtful if sufficient maize is on hand to provide seed for the large area that will be planted, and any idea of export may be dismissed. Consumption of wheat in place of maize for feeding purposes will be quite an item this year, and will cut down the export surplus. It is reported that there is now a good prospect of another big wheat crop. Sowing season has been remarkably favorable, and the plant has made a splendid start in cold, dry weather. Even at present prices wheat growing pays the colonist well enough, and it is the only business he is equipped for, so he may be counted on to keep at it for some years, whatever the level of prices.

The American consul at St. Petersburg reports that the new Siberian Railway will offer a very important outlet for the surplus Siberian farm products to the markets of Europe, and if the surplus is large the present depression in values, especially in grain, will thereby be intensified. A rough estimate of the surplus of wheat alone likely to be collected by the West Siberian section of the new railroad places it at about 6,000,000 bushels, and this is regarded decidedly as an underestimate. The completion of the line will act as a great stimulus to grain raising in the famous Chernozium (black soil) belt and the surplus will probably increase yearly. In 1889 the surplus grain in the Tobolsk, Tomsk and Yenisseisk districts exceeded 30,000,000 bushels, most of which was produced in Tobolsk and Tomsk, which are nearest European Russia. It is evident that such enormous quantities of grain will affect European markets if not the markets of the world.

HAY IMPORTS EXCEED EXPORTS.

Hay aggregating 11,799 tons, valued at \$95,967, was imported during July, according to the last report of the Bureau of Statistics, against 5,186 tons, valued at \$52,400, imported during July preceding; and during the seven months ending with July 68,049 tons, valued at \$580,086, were imported, against 71,871 tons, valued at \$665,876, imported during the corresponding months of the year preceding.

Of imported hay we exported 27 tons during July, against 90 tons in July preceding; and during the seven months ending with July 64 tons were exported, against 102 tons exported during the corresponding months of the year preceding.

We exported 3,151 tons of domestic hay, valued at \$51,889, during July, against 5,355 tons, valued at \$91,445, during July, 1893; and during the seven months ending with July 33,890 tons, valued at \$552,908, were exported, against 21,965 tons, valued at \$343,834, exported during the seven months ending with July, 1893.

There are secessions, divisions, wars and rumors of wars among the members of the Grain Shovelers' Union at Buffalo, N. Y. At present there are two sets of officers, and confusion is reigning.

One grain, the smallest weight standard in general use, was so-called from originally being the weight of a grain of wheat. A statute which became a law in England in 1266 ordained that 32 grains of wheat taken from the middle of the ear, or "head," and well dried, should make a pennyweight, 20 pennyweights one ounce, and 12 ounces one pound. Some centuries later there were some radical changes made in the above, such as dividing the pennyweight into 24 grains, etc. This makes 5,760 grains in the Troy pound, as now used.

TWO OF A KIND.



Both delight in a full crop.

CROP : CONDITIONS.

RICE IN LOUISIANA.—Seventy sacks of the new rice crop of Louisiana have been received in New Orleans, and it is claimed to be the finest ever raised in the state.

OHIO.—Corn is being cut for fodder on the upland. That on the bottoms may make half a crop. Potatoes are being dug. The crop is light and of inferior quality. Clover seed yields poorly. Buckwheat is doing fairly well.

MARYLAND. BURNT MILLS, MONTGOMERY Co., September 7.—Wheat is fine and very dry. Corn will be a fair crop in this county. A very large acreage of wheat will be sown this fall notwithstanding the low prices. W. M. FLING.

WASHINGTON.—Reports from the Palouse district show a very large yield of wheat of fine quality. The yield will be about 20 to 35 bushels per acre. The acreage sown to oats and barley is rather small, and the hay crop in some portions will be immense.

BROOMCORN IN ILLINOIS.—W. L. Roseboom, a local broomcorn dealer, who has just visited Arcola, Ill., the center of the broomcorn industry, says the damage is much less than was at first supposed. The acreage is large and the crop there will be a good one taken as a whole.

MISSOURI, MILL GROVE, MERCER Co., September 3.—We had a good rain last night, which brightened up the fields. Corn will not yield more than one-third of a crop. Wheat is good, and farmers are feeding it to hogs. They say it is cheaper than corn. H. W. HYLER.

WHEAT IN UTAH.—Utah's big wheat crop is now harvested, and all reports indicate an enormous yield, the heaviest, in fact, in the history of the territory. Expert estimates place the total yield at over three million bushels, and what the farmers are going to do with it now they have got it is one of the problems.

IDAHO, CŒUR D'ALENE, KOOTENAI Co.—Small grains will yield greater returns than any previous year, especially oats. Wheat is not extensively cultivated, only enough being raised for hog feed and for sale as poultry food, the soil not being adapted for the finer grades. The hay crop will be the largest ever known, as well as the best in quality.

KANSAS.—The weather bulletin reports more favorable conditions, as abundant rains have fallen over the larger portion of the state. Wheat that was sown right after harvest is two inches high. Flax and oats that were shelled in harvesting are growing. July planted corn is silking in the south. This week has seen much ground prepared for wheat.

POTATO CROP.—The potato crop will be considerably diminished by drouth. The last plantings may be benefited by rains in Northern New York, New England and the provinces. The provinces that export potatoes have a less average yield per acre. The acreage in the United States was slightly more than last year, but at its best will not yield 56 bushels per acre.

KENTUCKY.—The crop bulletin says that rain is needed, and though there is no general complaint of drouth, in some localities crops of all kinds are suffering. On the whole, however, the reports indicate a greatly more promising condition at present than for a long time past. Late corn has improved beyond expectation, and some say will be fully up to the average if favorable weather continues.

GOVERNMENT CROP REPORT ON CORN.—The September report of the Department of Agriculture shows a decline in corn of 31.6 since July 1, the average condition being 63.4, against 69.1 in August. The averages for the principal corn-growing states are: Illinois, 78; Indiana, 80; Ohio, 70; Michigan, 55; Wisconsin, 51; Minnesota, 60; Iowa, 40; Missouri, 50; Kansas, 45; Nebraska, 15; South Dakota, 16; Kentucky, 75. The percentages of corn cut up for fodder or abandoned in eight states is as follows: Indiana, 6; Illinois, 10; Wisconsin, 21; Iowa, 35; Missouri, 16; Kansas, 51; Nebraska, 81; South Dakota, 81.

HAY CROP.—The *Hay Trade Journal's* hay crop report for 1894, compiled on a percentage basis from reports received, shows a slight increase in yield in New York, of a better quality than last year and same acreage. Pennsylvania has the same acreage, of a better quality, but 9 per cent. less than an average yield. New Jersey has an average crop and acreage, of a better quality. With 10 per cent. more acreage Ohio has 8 per cent. less than average yield, better in quality. Indiana has same acreage, 8 per cent. less yield and better quality. Michigan has 9 per cent. less yield of better quality, with 10 per cent. more acreage. Illinois has 8 per cent. less yield, better quality and 9 per cent. less acreage. Wisconsin has 8 per cent. less yield of better quality and same acreage. Nebraska has 50 per cent. less yield of the same quality and 2 per cent. more acreage, while Iowa has 46 per cent. less in yield of a better quality and 9 per cent. less acreage. Minnesota, Kansas and Missouri have about 7 per cent. less in yield, of a little

better quality and less acreage. In Vermont, New Hampshire, Massachusetts, Rhode Island and Connecticut the conditions are about the same as last year, with a little better quality. Quebec has an average yield, Ontario 9 per cent. less, both with average quality and acreage.

MICHIGAN CROPS.—The crop report says: Crops will yield but a small per cent. of an average, and pastures afford little or no feed for stock. The fact that in a few localities rain has been slightly more abundant and crops are consequently somewhat better does not disprove the general statement. There is little doubt that wheat will be largely fed to stock the coming winter. One country miller writes that he has already ground 1,500 bushels for feed. Correspondents report that the average yield per acre in the state is 16.65 bushels. The average in the southern counties is 16.78 bushels; in the central 16.20 bushels, and in the northern 13.95 bushels.

MISSOURI.—Many correspondents in the central and northern sections state that corn is now too far gone to be benefited by rain. Cutting is in progress in most counties, and in some is well advanced. In a number of the southeastern counties late corn shows considerable improvement since the recent rains, but in others it has dried up and much of it is being cut. Cinch bugs are still doing much damage in a number of counties. Considered for the state at large corn is very spotted and estimates of the probable yield vary greatly, but it is believed that rather more than half an average crop will be secured. Late potatoes are generally a light crop, though in a few localities a good yield is reported.

ILLINOIS, JONESBORO, UNION Co., August 27.—The condition of the corn crop in this end of the state is poor, a great many fields being burned up, and will hardly be suitable for fodder. Late corn and corn in valley fields will yield about one-third of a crop. Along the great Mississippi bottoms, the corn belt of this region, the crop will be almost a total failure. Hay is scarce and very poor. Three-fourths of the clover was killed by the heavy freeze last March. On this account the acreage of wheat sown this fall will be larger than last year, as the ground can be better utilized for this crop than for any other, wheat being cheaper and easier to raise. The quality of the new crop coming in was never better in this part of the state. The grain is of uniform size, well filled and clean. Some weighs 63 pounds to the bushel. The recent upward tendency of this market has cut off two-thirds of the daily average local receipts since threshing began, producers thinking prices will go higher. This county is the banner wheat-producing county in the state for quality of grain. Farmers grow only enough oats for feeding purposes. The crop was fairly good. Very little barley is grown, though it yields well here. A great many farmers are having wheat crushed and feeding it to stock. ED. LEE.

GOVERNMENT CROP REPORT.—According to the crop report of the Board of Agriculture the condition of spring and winter wheat combined is 83.7, against 74 last year. The conditions in the principal wheat growing states are as follows: Ohio, 102; Michigan, 91; Indiana, 103; Illinois, 101; Wisconsin, 92; Minnesota, 85; Iowa, 92; Missouri, 91; Kansas, 58; Nebraska, 40; South Dakota, 32; North Dakota, 74; California, 88; Oregon, 88; Washington, 67. In the East, New York, 86; Pennsylvania, 91; Maryland, 98; Virginia reports 78; Tennessee, 78; West Virginia, 93; Kentucky, 92; Texas, 92. The average condition of oats is 77.8, against 76.5 August 1. Rye shows an average condition of 86.9, against 82 a year ago. The condition of barley has risen nearly two points during the month, the September average standing at 71.5, against 69.8 in August. There is a decline in September condition of buckwheat of 12.5 points from that of August, the general average being 69.2, against 77.5 last year. The area under clover seed is reported at 71.9 of that for 1893. The condition is given at 63.2, which is much below the average, thus indicating a very short crop. The general average of condition for rice is 89.4. The condition of tobacco is 74.5, against 75.9 last month.

The first consignment of new clover on the Chicago market arrived August 23. It comprised small lots of Good but not Choice seed, and brought \$9.35@9.50.

Keep your eye on the markets if you mean business. The *Hay Trade Journal*, published weekly, contains the reports of all markets that shippers find indispensable. Subscribe for it and the *AMERICAN ELEVATOR AND GRAIN TRADE* at a clubbing rate of \$2 per year.

The American duty which came into force last Monday means a reduction of about \$3 per ton at present prices; consequently No. 2 Canadian Hay, it is expected, will find a better market in the United States than in England. So that what may be lost by the demoralized condition of the English market may be gained by the reduction in the United States duty. Hitherto American buyers have only taken No. 1 Canadian for consumption in their own market, but now we are informed by dealers here that they will take No. 2, owing to the very reasonable prices they can buy it at.—*Montreal Hay Trade Journal*.

OBITUARY

Wm. Heyward, grain and coal dealer of Chatham, N. Y., is dead.

Robt. J. Grant, dealer in grain and wool at Hastings, Mich., died recently.

Dennis Morton, a pioneer grain man of Burlington, Iowa, died recently of apoplexy.

W. R. Ellsworth, manager of the Farmers' Elevator Company at Jackson, Minn., died on board a train August 15.

J. B. Fitch, manager of the Northern Grain Company and formerly city clerk of Ashland, Wis., died August 17 at the age of 62.

George R. Coffin, a well-known member of the grain business in Boston, died August 21. For many years he was one of the principal grain operators of Boston, controlling the Lowell Elevator and serving as grain inspector.

John G. A. Owens, a member of the firm of Owens Bros. of Baltimore, Md., died August 27 at the age of 34. He had been engaged in the grain business for fifteen years, and was a member of the Corn and Flour Exchange at the time of his death.

THE MARKETS.

We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.

GRAIN REPORT OF COLLINS & Co., Cincinnati, Ohio, Sept. 10, 1894.—The movement of grain to this market continues to be very small, and there is more strength developed in prices of all kinds of grain and hay. The general outlook justifies that wheat will rule higher, as the extent to which it is being substituted for corn for feeding purposes is attracting general attention. **WHEAT.**—The demand is more active and the receipts are not equal to the inquiry, with No. 2 Red at 51½ cents. Choice at 52@52½ cents. No. 3 at 51 cents, and the market is very firm. **CORN.**—The demand continues to rule strong, and the inquiry is not for any large quantities; but the arrivals are not sufficient to meet the requirements of the trade, which has caused prices to rule higher for all kinds, No. 2 White at 59½@60 cents, No. 3 at 58½@59 cents, No. 2 Mixed and Yellow at 59 cents, No. 3 at 58 cents, and the few offerings sold very readily. **EAR CORN.**—Corn is firmer under light receipts, with Mixed at 58 cents, Yellow at 58½@59 cents, White at 58 cents, and the receipts are quite meager. **OATS.**—Oats are ruling strong and higher under light arrivals and a greater demand, with No. 2 White at 34@34½ cents, Choice at 35 cents, No. 3 at 33 cents, No. 2 Mixed at 32 cents, No. 3 at 31 cents and the sample lots at 30@30½ cents, closing with the tendency higher. **RYE.**—Very little offered. No. 2 at 47½ cents, Choice at 48 cents. **HAY.**—Receipts for last week were 2,300 tons, shipments 847 tons. For the corresponding week last year the receipts were 1,442 tons and shipments 743 tons. There are fewer offerings on the market and a healthier condition. A more confident feeling is very manifest, with prices a little firmer. Choice Timothy at \$10.50@10.75, No. 1 at \$10.00@10.25, No. 2 at \$8.50@9.50, Clover, Mixed at \$8.50@9.00, Mixed at \$7.50@8.00. Pure Clover is in light supply and selling at \$9.00 for good quality. Straw is firm for good clean stock at \$4.00@4.50. **MILL FEED.**—The offerings are light, and the demand is active at quotations. Bran at \$13.50@14.00, Middlings at \$14.50@15.00, and \$1.00 more including sacks.

GRAIN REPORT OF L. NORMAN & Co., LTD., London, Aug. 27.—The continued unsettled weather, coupled with better American advices, has at length made some impression on the wheat trade, there having been a firmer tone since our last published report. At the same time the amount of business passing is still limited, buyers showing no disposition to operate freely; but there has certainly been more bidding, and a larger trade would no doubt have passed but for the fact that sellers are offering sparingly. Some samples of new English wheat have been on offer, but owing to wet the quality in some cases is very poor. Some in bad condition are worth 16s. to 18s. per quarter, while those in fair condition fetched 21s. to 23s. per quarter. The following are the c.i.f. prices paid during the past week: La Plata sailer cargoes 19s. 6d. to 20s., Californian 24s., Australian 24s. 6d. A fair business has been done in Russians from 17s. 6d. to 21s. 6d., according to quality. Atlantic wheats have met with more inquiry. Red winters selling up to 20s. 10½d. **HARD MANITOBA.**—Firm, but in small demand. For parcel just shipped 23s. 9d. c. i. f. asked, and for Sept.-Oct. shipment sellers ask 23s. 10½d. c. i. f., but buyers are slow to follow. **HARD DULUTH.**—Firm. A fair business has been done during the week from 23s. 6d. to 23s. 10½d. c. i. f. **BARLEY.**—Grinding qualities weak and lower to sell. The continued wet weather in England and Germany has further damaged the crop. **OATS.**—Show no change. The tone on the spot and for shipment continues steady. **PEAS.**—Without change. New crop Canadian offering at 25s. 3d. c. i. f., old crop at 25s. 9d. c. i. f., with buyers about sixpence less. **HAY.**—Imports of foreign continue liberal, but the abundance of grass in the country checks demand. Canadian sound delivered in London is offering at £3 18s. 9d. For shipment sellers ask £3 10s. c. i. f., but no buyers.

A Missouri paper is petitioning its subscribers to square up and offers to take wheat at 50 cents a bushel.

The first car of new barley received at Duluth this season arrived August 11. It came from North Dakota and graded No Grade, selling at 43 cents per bushel.

WATERWAYS

Captain J. S. Dunham will represent the Chicago Board of Trade at the deep waterways convention at Toronto.

Representatives of shipping interests at the head of the lakes have been appointed to attend the deep waterway convention to be held at Toronto shortly.

A break occurred in the Erie Canal at Brighton, just east of Rochester, N. Y., August 28, doing considerable damage to the surrounding country.

It is said that there is a probability of the constitutional convention at Albany, N. Y., passing resolutions recommending that the Erie Canal be withdrawn from free Canadian traffic.

Superior would possess the finest harbor in the world, if talk would improve it. The harbor needs deepening and other improvements, and there is considerable agitation to have the work undertaken.

At Port Costa, Cal., there are said to be 228,000 tons of wheat that must be shipped before winter. Vessel owners are well aware of the pinch this gives them, and freights to Liverpool have consequently risen to 27s. 6d.

The Duluth Board of Trade has adopted resolutions favoring the enlargement of the "Soo" Canal to accommodate the growing demands of American lake shipping. Vessel owners and other commercial bodies are requested to take like action.

The question of American or foreign control of the Nicaragua Canal is still agitating the muddy bottom of the public opinion of two countries. A committee in London is seeking money for the construction of the waterway, and America is ready to jump at it if England offers to take control.

As we have frequently urged, it is quite evident that nothing but perfect reciprocity will satisfy our neighbors. Indeed, nothing less should satisfy them. Canada owes to her neighbors and to her own citizens alike that her canals should be opened free of tolls or dues of any kind.—*Trade Bulletin, Montreal.*

In looking over a market report of 1856 and comparing the freight rates to Buffalo with those now in force, there is a striking difference. Flour by lake was 85 cents per barrel; wheat 22 cents per 100 pounds. The canal rate from Buffalo to New York was 25 cents per bushel. Were the present lake carriers to get such rates there would be no living with them.

A Toronto paper says that the total production of wheat in Manitoba and the territories will soon reach such an amount that the saving of 5 cents a bushel in the cost of transporting half the crop to the sea will give revenue enough to pay the whole interest charge on the capital required to give a minimum depth of 20 feet to the waterway between Toronto and the Atlantic.

Some of the chief items in the River and Harbor Bill which became a law in the last Congress, together with the appropriations, is as follows: Buffalo, \$70,000; Duluth, \$75,000; Superior Bay and St. Louis Bay, Wis., \$50,000; St. Joseph and Muskegon, Mich., \$30,000 each; Toledo, channel through Maumee Bay, \$70,000; Cleveland, \$50,000; Sandusky, \$30,000; Oswego, N. Y., \$37,000; Ogdensburg, \$20,000.

A curious experiment was recently tried in the Chesapeake and Ohio Canal. It was nothing less than mowing the thick grass growing in the bed of the stream. An ordinary harvesting mower was lowered to the bottom and attached to the rear of a scow drawn by a heavy team. The machine cut a wide swath and sent to the surface tons of long river grass which had greatly impeded navigation.

As provided in the River and Harbor Appropriation act a board of engineers will survey the different proposed routes for the canal connecting Lake Erie with the Ohio River. The routes to be surveyed are from Erie to Pittsburg, from Cleveland to Marietta, and from Toledo to Cincinnati. Each of these routes has waterways, and the comparative cost of deepening, widening, etc., will be ascertained by the board to be appointed.

The Buffalo Merchants' Exchange are very worthily seeking to defeat measures in the New York Constitutional Convention adverse to the future improvement of the Erie Canal. While the wild and woolly West is surveying for new canals and constructing others, the great state of New York, under the domination of railways, seems to favor the abandonment of the greatest commercial waterway in the world.—*Toledo Market Report.*

The international canal convention, called to meet at Toronto early next month, cannot result in anything practicable. The Canadians would never suffer a joint control of a waterway through their territory; neither would the United States care about entering into a pooling arrangement of interests whereby the Dominion authorities might lay claim to a certain amount of jurisdiction over our strictly national, if

artificial, waterways. As a junketing party or a mutual admiration conclave the convention may be a success, but as a means of influencing a strangely national departure it can only result in a fiasco.—*Marine Record.*

Some of the amendments providing for canal improvements which are offered at the constitutional convention at Albany, N. Y., are not received with entire approbation by several Boards of Trade, apropos which the *Canal Defender* thanks God that there are "good loyal friends among the delegates who would inform the convention as to what the canals need, why these needs exist and how imperative an immediate remedy is."

The agitation of the proposed ship canal connecting Lake Superior with the Atlantic Ocean is growing daily. The prospects are that it will remain an agitation for some time to come. The chief promoters of the scheme confidently assert that the saving of freights by such a canal would amount to \$50,000,000, which, together with the saving in freight by present water transportation through the chain of lakes, will amount to \$150,000,000 annually.

Work on the Hennepin Canal has begun. This waterway will connect the Illinois and Mississippi Rivers. Contracts are let for each mile and each lock separately by the government, and if the work is done by other than animal power a deduction of 1 cent a cubic yard will be made. This deduction is made as the government engineers consider the trampling of horses and men over the ground is worth that much in the way of packing the embankments.

A provisional committee on ways and means has been appointed to look after the interests of the proposed canal to connect the Ohio River with the lakes. An engineer has asserted that the water supply tributary to the canal is four times greater than needed, and can be reached at a cost of \$600,000; that the cost of the canal would not exceed \$25,000,000, and that it would have a capacity of 15,600,000 tons per annum, double the present tonnage of the railroads covering the same territory. Enthusiasts say that the completion of the canal would double the commercial interests of the territory.

France has long been using a system of electrical propulsion of canal boats similar to the plans adopted in the United States. On the French boats, however, the electric motors drive trains of gearing by which a chain on the bottom of the canal is clutched, thus pulling the boats along. Chain haulage of this general kind has long been in use on some of the European waterways, and in itself is nothing new, simply illustrating in this instance another example of electric development of an old method of propulsion.

Some interesting facts regarding canal boats and water and land traffic are here brought out: A modern canal boat will carry as much cargo as a train of 40 cars, the dead weight moved being much in favor of the barge. The same amount of power applied in traction will move five times the load on a waterway that it will on a railway. The original cost of construction and maintenance of a canal is considerably less than that of a railway. By rail the expense of conveyance, inclusive of charges due to maintenance of way, is ten times as great as on the lake steamboats.

To those overzealous persons who are advocating the possession of the Nicaragua Canal by the United States, we would suggest that before this government becomes responsible for the completion of the canal there are a few points to be settled. The cost should be determined more definitely. At present the lowest estimate is \$65,000,000, and the highest is \$400,000,000, quite a difference upon which to pledge the credit of a government. Will the canal be an important factor in diverting the traffic of China, Japan and India to Europe? In short, there are two sides to be considered, the cost and the value.

If the friends of the canals in the Constitutional Convention should be beaten, the resemblance of that body to an average legislature at Albany would become still closer. The state of New York has been at the head of the states of the Union three-quarters of a century, but it cannot maintain this rank and its commercial supremacy much longer except by great efforts, and by a wise and enlightened policy. This includes the maintenance and improvement of the canal system, that has done so much to build up the greatness of this state and remains of vital importance to its future prosperity.—*Buffalo Courier.*

Some Washington wheat exporters are taking a sensible stand that others could profitably follow. They have agreed not to accept any of this season's crop that is mixed with last season's wheat.

Spokane, Wash., merchants have asked the courts to compel the Northern Pacific Railroad to cease the discrimination which, they allege, it has been practicing against them. The petitioners pray that the officials be required to adjust the freight rates so as to be relative and within themselves be reasonable, and that no greater charge be permitted from Spokane to Eastern terminals than from Eastern terminals to Spokane, except on such articles as are truly subject to water competition.

THE EXCHANGES

Tickets of membership to the New York Produce Exchange are held at \$475.

The Duluth Board of Trade has decreed that a carload of flax shall contain 500 bushels.

The Milwaukee Chamber of Commerce is negotiating for the purchase of its building. It carries a lease at present.

The Minneapolis Chamber of Commerce has decided not to make an addition to its building, at least for some time.

The Duluth Board of Trade has adopted the system of trading in wheat by sample. One day recently grain men appeared on the floor with samples, and the scheme proved so successful that the board at once decided to make the sale of wheat by sample a permanent feature.

At a recent meeting of the St. Louis Merchants' Exchange protestations were made against the action of the Board of Railroad and Warehouse Commissioners in advancing the fees for grain inspection and weighing on the St. Louis side of the river. The inspection per car was advanced from 60 cents to 75 cents. A committee will investigate the subject.

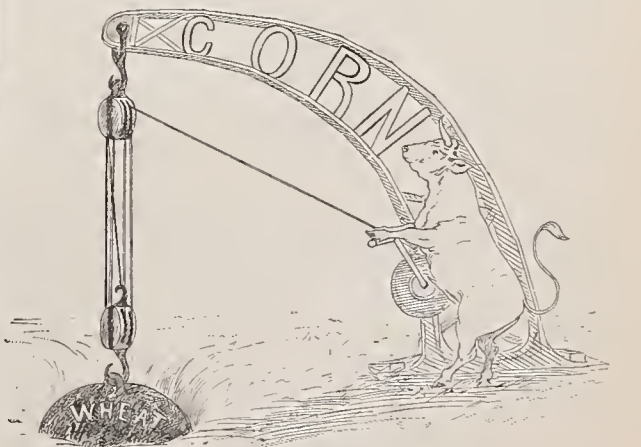
The arbitration committee of the New York Produce Exchange has rendered an important decision regarding strikes. An appeal was made by purchasers for cancellation of contracts because goods had not been delivered on time. In answer it was claimed that the strike had caused the delay, and delivery would be made as soon as possible. After a careful consideration the committee decided that contracts could not be broken on account of delay caused by strikes and that time must be granted for delivery.

The following named members of the Winnipeg Produce and Grain Exchange have been appointed to select the standards of grain grown west of Port Arthur: Samuel Spink, J. A. Mitchell, S. A. McGaw and J. Harris, Winnipeg; W. R. Bell, Angus McKay, Indian Head; J. Elder, Virden; W. Postlethwaite, Brandon; Chas. Braithwaite, Portage la Prairie; T. Baker, Moose Jaw; C. B. Watts, G. H. Champion, Toronto; J. Carruthers, T. A. Crane, Montreal; F. E. Gibbs and D. Horue, departmental inspectors; C. N. Bell, secretary.

George A. Abel, chief inspector of the San Francisco Produce Exchange, intends to give the continent an object lesson. He has prepared, at the request of the Belgian Consul at that port, a case of sheaves for exhibition at the Antwerp Exposition. The case, which has already started upon its journey, contains five specimens of wheat, Club, Australian, Propo, Pride of Butte and Salt Lake Club, Chevalier and common barley, rye and California wild oats. There are about 100 sheaves in all, and that they reflect credit upon the state and the Exchange may be taken for granted.

The Baltimore Corn and Flour Exchange has adopted plans for the institution of a grain clearing-house. The plans will go into effect October 1, and does away with the committee on margins, which heretofore has been the medium for settling differences in transactions made on the floor. Clearings will be made through some bank in Baltimore to be selected by the committee and approved by the Exchange directors. The general plan of the clearing house is similar to that under which the banks settle daily differences in accounts among each other. All settlements of grain contracts through the clearing-house will be made by certified checks.

WILL IT WORK?



—From J. F. Zahm & Co.'s Circular.

Fires, Casualties, Etc.

The elevator at Caledonia, Ill., was burned September 8.

An elevator at South Elmhurst, Ill., burned August 25.

H. H. Leech, grain dealer at Boelus, Neb., has recently suffered a loss by fire.

The elevator at Boelus, Neb., was burned August 21. Incendiarism is suspected.

Brooks Bros., grain and lumber dealers at Minneapolis, Minn., suffered a loss by fire.

Mr. Jake Klais' granary at Rice, Ill., collapsed recently. It contained 1,000 bushels of oats.

The Palouse Elevator Company's warehouse at Spokane, Wash., has been destroyed by fire.

The Muench brewing plant at Appleton, Wis., burned August 28. Loss \$35,500; insurance \$22,400.

Thomas Midwinter's broomcorn house at Arcola, Ill., was burned recently. It was partially insured for \$1,300.

McGlasson & Co.'s grain warehouse at Troy, Texas, fell over recently. It was filled with sacked oats. Loss \$300.

W. B. Newbegin & Co.'s 6,000-bushel elevator at Blue Mound, Ill., was destroyed by fire recently at a loss of \$9,000.

Thayer & Son's elevator at Plymouth, Ind., burned recently, together with 17,500 bushels of grain belonging to farmers.

Wm. Caldwell & Co.'s grain warehouse at Lodi, Wis., was totally destroyed by fire August 21. Loss \$4,000; insurance \$2,000.

Cargill Bros' elevator at Addison, N. D., collapsed September 1. New foundation and blocking had recently been put under it.

Decorah, Iowa, is now without an elevator. The last remaining house, belonging to Gilchrist & Co. of McGregor, burned last month.

The Lamberton Elevator at Simpson, Minn., was burned August 11, together with 6,000 bushels of grain. Loss \$35,000; fully insured.

The McFarlin Grain Company's coal house at Jefferson, Iowa, burned recently, together with considerable coal, from spontaneous combustion.

The Davidson Mill and Elevator at Davidson, Mich., was destroyed by fire September 1, together with several other buildings. The total loss was about \$15,000.

Busch & Epps Malting Company's malthouse at Chicago was destroyed by fire August 15 at an estimated loss of \$100,000. A large amount of grain was destroyed.

Ellsworth H. Morse, a grain buyer for Counselman & Co. of Chicago, was killed in the Rock Island wreck near Lincoln, Neb. He was to have been married in a short time.

The plant of the Kem Brewing Company at Port Huron, Mich., was destroyed by fire August 16, entailing a loss of \$80,000. It was partially insured and may be rebuilt.

Rush & Sprague's elevator at Leavenworth, Kan., suffered damage by fire August 18 to the extent of \$6,000. The fire started in and was mostly confined to the engine room.

The grain warehouse used by E. W. Page & Sons at Girard, Ill., slid off its foundation one day last month. There was about 5,000 bushels of wheat stored which had to be loaded into cars.

A. S. Tucker, a speculator on the Board of Trade at Chicago, Ill., committed suicide August 23 by shooting himself in the head. He had been unfortunate in his speculations in wheat.

The Monarch Elevator at Bowesmont, N. D., suffered a loss by fire of \$2,500 August 10. Tramps had been sleeping there. The Minnesota and Dakota Elevator took fire several times, but received little damage.

Bowen, Regar & Co.'s grain office at Baxter, Iowa, was entered by burglars recently. They tried to open the safe, but, not succeeding, left a nice kit of their peculiar paraphernalia as a kind remembrance or as a challenge to anyone else who'd like to try the blamed thing.

Jesse Cook, the 14-year-old son of Ira Cook, employed in the elevator at Milford, Ill., narrowly escaped death recently. He was shoveling grain in the oats bin, which was being filled, when one side of the bin broke out and precipitated the boy, together with 4,000 bushels of grain, to the ground. He was dug

out within 15 minutes and found to be uninjured. Such accidents are getting too numerous and too serious for country barn builders to be tolerated.

Jacobson & Beall's elevator and grain office at Niantic, Ill., was burned August 11. The total loss is about \$8,000, and the total insurance \$4,650. The fire is supposed to have started in the engine room. They will rebuild at once.

James Dunlap's elevator at Haysville, Ohio, was destroyed by fire August 30. The building contained 2,000 bushels of corn and 3,100 bushels of wheat. Total loss \$6,000; insurance \$2,800. This is the third time the elevator has burned.

The elevator at Forest, Ont., owned by the Forest Elevator & Milling Company, was burned on the morning of August 10. About 6,000 bushels of wheat and 2,700 bushels of oats were stored in the elevator. Loss \$6,000; insurance \$5,000.

Maas & Co.'s elevator at Mazeppa, Minn., just escaped being destroyed by fire recently. The fire department was in such a state of decrepitude that it could not be used, and had the fire not been discovered in time the destruction of the elevator would have resulted.

The burning of D. Milligan & Co.'s elevator at Eldora, Iowa, August 11, was incorrectly stated in these columns last month. The loss on the elevator was \$3,500, with an insurance of \$1,800. Oats to the amount of 1,800 bushels was destroyed, but was fully insured.

On August 27 Walter Long, a young man of Flora, Ind., jumped into a great bin of wheat which was being loaded from an elevator into a car on the track below. The suction was so great that he was drawn in and suffocated before any effort could be made to save him.

Philip Eiseman, a driver, dropped himself from a wagon into a grain chute at the Northern Central Elevator No. 2 at Baltimore, Md., August 16. At the bottom of the chute was a chain conveyor, the buckets of which badly mangled his legs before he could be rescued.

One of the walls of the S. P. Milling Company's warehouse near the Alliance Mill at San Luis Obispo, Cal., gave way and fell out recently, caused by the great weight of the grain piled against it. It always pays to consult with a first-class architect and builder in the erection of an elevator.

An oats bin belonging to the elevator of Buckley, Pursley & Co. at Macomb, Ill., gave way in one of its joints recently, and spilled a thousand bushels of grain on the ground. The company says that oats weigh more this year than they did formerly, accounting for the extra strain.

The grain elevator and flour mill at Benton, Ohio, owned by I. Seery & Bro., were destroyed by fire on the night of August 14. The fire started in some way in the engine room. A large amount of flour and grain was consumed. The loss is estimated at \$15,000, with small insurance.

The Northern Elevator Company's 80,000-bushel elevator at Winnipeg, Manitoba, was destroyed by fire August 17, together with 40,000 bushels of oats stored therein. The loss on elevator and grain is about \$25,000. The building was insured for \$7,000, the grain also being well covered. The fire is supposed to have started from friction in the cupola.

A disastrous fire at Kingsley, Iowa, destroyed Cathcart Bros' elevator, Shad, Edmonds & Co.'s elevator and Herron Bros' feed mill and other property. Over 3,000 bushels of grain was consumed. Incendiarism is suspected. The loss on the Cathcart elevator and grain is \$6,100, with an insurance of \$3,000 on the elevator. The loss to Shad, Edmonds & Co. on elevator and grain is \$6,000, partially insured.

OUR CARD BASKET

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

J. F. Oglevee of The Case Manufacturing Company, Columbus, Ohio.

J. Silas Leas of the Barnard & Leas Manufacturing Company, Moline, Ill.

C. R. Knickerbocker of The Knickerbocker Company, Jackson, Mich.

W. D. Gray, representing the Edw. P. Allis Company of Milwaukee, Wis.

E. O. Moffatt of the Moffatt & Lee Commission Company, Kansas City, Mo.

L. S. Hogeboom of Minneapolis, Minn., representing The Knickerbocker Company.

The traditional advantage of an ounce of prevention is brought home to us by the increasing number of accidents about grain dealers' quarters. W. K. Voorhees of Brooklyn, N. Y., is being sued for \$10,000 damages because a bale of hay being unloaded from one of his trucks fell on a child and inflicted what may be permanent injuries.

PRESS COMMENT.

SPECULATION ON THE DIVIDEND PLAN.

Parties in small towns should beware of all schemes for speculating in grain, stocks and provisions through institutions which are managed on the dividend plan, and profits guaranteed. It may be accepted as a fact—if any person has a positive sure plan of speculating he is not giving anyone else the benefit of it.—*Chicago Bulletin.*

RENEWED GRIP UPON THE GRAIN TRADE.

The great elevator monopoly has about renewed its grip upon the grain trade of the west passing through Buffalo, and the old rates for the elevation and storage of grain were announced to be restored Friday. During the war between the elevator combine and the floating elevators grain was transferred from lake vessels to canal boats at $\frac{1}{2}$ cent per bushel. The restored rates are $\frac{3}{4}$ cent, or as much as vessels receive for carrying the grain to Buffalo from Chicago.—*Chicago Record.*

IMPROVEMENT OF THE ERIE CANAL.

Since 1862 there has been no change in the canal prism, and the boats built at that time carried as much freight, and as rapidly as to-day. Contrast this stagnated condition of development with the phenomenal advances in railroad construction and equipment within the same period, and who can deny that canal improvement is not only reasonable, but essential? And it will also be well to bear in mind that the friends of the canal have united in a request for a method of improvement, the most inexpensive, the most necessary, and the most vital to their usefulness and preservation.—*Canal Defender.*

CHANCES AGAINST BUCKET SHOP PATRONS.

What guarantee have those customers who have deposited their margins on corn and wheat in the bucket shops that they will get their margins back, letting alone the profits? When the market is against the bucket shop, and in favor of their customers, the excuse is frequently made that the wires are not working; but whenever the market is in favor of the bucket shop and against the customers, the wires invariably work splendidly and without the slightest hitch. Not only have the proprietors of these resorts two chances to one against those of their customers, but they have the cash in hand to begin with.—*Montreal Trade Bulletin.*

CAR MILEAGE.

It is safe to say that were it not for the existence of private cars there would be no objection offered to the proposed rate of $\frac{1}{2}$ cent per mile. It has been repeatedly demonstrated that at the higher rate heretofore in effect the ownership of such cars has proved to be a veritable bonanza. Net earnings of 33 $\frac{1}{3}$ per cent, on actual cost is a comparatively common matter and double that amount is not unusual. It is not surprising, therefore, that the men interested in such lines, both in and out of the railway service, should use their utmost efforts to have this very profitable mileage rate continued in force; and the influence exerted to this end, coming as it does from such high sources, is difficult to withstand.—*Railway Review.*

UNIFORM HAY STANDARDS NEEDED.

In no business, the products of which are subject to classification or grades, is there such indefiniteness or lack of uniform standards as that which characterizes the hay business. An effort should be made by both shipper and commission man to arrive at a more thorough understanding—disputes would, therefore, be of less frequent occurrence and a general more satisfactory business would result. The shipper should know to a certainty just what qualities his shipments include, and further that there can be no questioning the classes designated by him, no matter in what market his product may finally arrive. Lack of uniformity in the standards accepted at various important hay centers has caused many bitter disputes and heated controversies.—*Hay Trade.*

OFF THE COB.



Latest Decisions.

Validity of Purchase of Wheat on Margin.

Where parties bought through reputable members of the Chicago Board of Trade a certain quantity of wheat which was delivered to them in the shape of warehouse receipts, and actual delivery was intended by all parties, as they could have received the wheat on demand, but after carrying it awhile on margin with said dealers the wheat depreciated and was closed out at a loss, which was all paid by one of the parties, the other giving his note for his share of the loss. A finding that the note was not founded on a gambling contract will not be reversed.—*Fisher vs. Fisher, Appellate Court of Indiana, 36 N. E. Rep. 296.*

Violation of Interstate Commerce Act.

A contract to procure rebates from railroad companies for a shipper is void because it contemplates a violation of the interstate act, which declares that discrimination by carriers is thereby "prohibited and declared to be unlawful." Where a contract to procure rebates from railroad companies does not show on its face that rebates from railroads carrying freight outside the state in violation of the interstate commerce act were contemplated, evidence that such rebates were in fact procured is admissible to show the intent of the parties in making the contract.—*Parks vs. Jacob Dold Packing Company, Superior Court of Buffalo, General Term, 27 N. Y. Supp. 289.*

Rights in Property Consigned to Agents for Sale.

Where a contract of agency is entered into, and the principal agrees to furnish to the agent on consignment certain articles, at a stipulated price, to be paid for when sold, the Supreme Court of Appeals of West Virginia holds, after carefully examining many decisions on the subject, that such articles, when so furnished, remain the property of the principal until sold to a bona fide purchaser, and they cannot be levied on and sold under execution to pay the debts of the agent, and if so sold the purchaser gets no title to any such articles as against such principal. Moreover, the agent's right to a lien for commission and expenditures is declared to be one personal to himself, not transferable, and one of which he alone has the right to take advantage.

Telegram—Non-Delivery—Conditions.

Where a message was delivered to a telegraph company for transmission, which was written on one of its blanks upon which was printed the following conditions: First, that the company would not be liable for mistakes or delays in the transmission or delivery or for non-delivery of the message beyond the sum paid for sending the same, unless the message was ordered repeated, and, second, that the company would not be liable for damages in any case where the claim was not presented within sixty days after the message was filed with the company for transmission, and the company neglected to transmit the message at all and the addressee brought an action, the Supreme Court of Minnesota held (*Francis vs. Western Union Telegraph Company*) that the conditions were unreasonable and inapplicable.

Right of Shippers to Protection of Interstate Bills of Lading.

Railroad companies are inclined, when it suits their purpose, to use the Interstate Commerce Law as a sandbag. An example of this is furnished in their frequent refusal to protect contract rates where they are found to be too low, made so by mistake. The shippers may have made all calculations on the basis of rates promised to them only to find themselves confronted with serious corrections, as they are called, at destination. The Interstate Commerce Commission, however, say that where the shipper did not enter into the contract willfully for the purpose of securing a rate which he knew, or by exercise of reasonable diligence might have known, to be illegal, but was an innocent party to it and made the shipment on the faith of the rate named, justice to the shipper requires that the goods be delivered on payment by him of the amount specified in the contract.

Cornering the Grain Market on Illegal Contracts.

Under the statutes which make it a penal offense to "corner the market or to attempt to do so," and declares all contracts made for that purpose void, there can be no recovery for advances made and expenses incurred in purchasing corn in pursuance of an agreement or understanding to enhance the price of corn. All contracts between merchants, speculators or any class of men to elevate or depress the market are injurious to the public interest and in restraint of trade. When such a purpose is apparent in a contract it strikes the agreement with nullity. Such a combination of dealers is nothing less than a conspiracy against trade, entered into for selfish purposes. Whether the design is to bring the price of any com-

modity to a point below its value in a fair and open market, or to raise it above its true worth, the illegality of the combination is the same. Such design will not be furthered by the courts, though there may be circumstances under which the object of such a contract does not sufficiently appear to expose the illegality. If the true character is known the contract will be held void. It makes no difference that the agreement is only in partial restraint of trade. If the public is injuriously affected (and that is necessarily so when the combination tends to increase the price of a commodity of general use), it is illegal.—*Foss vs. Cummings, Supreme Court of Illinois, 36 N. E. Rep. 553.*



Ham Griffie will have charge of the elevator at Faulkton, S. D.

E. L. Iverson is in charge of the Monarch Elevator at Glover, N. D.

F. B. Smith has taken a position in an elevator at Valley City, N. D.

J. H. Butler has taken charge of the Peavey Elevator at Carroll, Neb.

Marshall Vincent is now buying grain for Emmet Sayer at Britton, S. D.

J. B. Myers has taken charge of the Riverdale Elevator at Ludden, N. D.

A. E. Corey has taken charge of the McMichael Elevator at Bryant, S. D.

N. O. Parsons has taken charge of the Monarch Elevator at Valley City, N. D.

Gunder Lunde will buy grain for the Cargill Company at Lake Preston, S. D.

H. G. Kerr is operating an elevator at Fergus Falls, Minn., for Andrews & Gage.

C. C. Elliott is buying grain for the Bagley Elevator Company at Aberdeen, S. D.

C. M. Eveleth is buying grain for the Farmers' Elevator Company at Lily, S. D.

S. H. Waggoner has taken charge of the Monarch Elevator at Forest River, N. D.

O. C. Hanson will buy wheat for Andrews & Gage at Clitherall, Minn., this season.

Cargill Bros. have placed C. Gleason in charge of their elevator at Bethany, Minn.

Charles Stewart has accepted a position at the Monarch Elevator at Sykeston, N. D.

G. T. Hoff has been appointed agent of the Northwestern Elevator at Ashby, Minn.

William Shively has taken the management of the O'Neill Elevator at Remsen, Iowa.

Andrew Melham is buying grain at Brandt, S. D., for the Davenport Milling Company.

D. W. Bremer is buying grain at Palmer, S. D., for W. H. Stokes, miller, of Watertown.

A. J. Kringsrud will again operate the Eagle Roller Mill's elevator at Lake Preston, S. D.

Timothy Collins is representing George Thayer & Co., grain dealers, at Huntington, Ind.

C. G. Spaulding has obtained the services of J. H. Dobie as grain buyer at Mapleton, Minn.

A. C. Mogan will look after the interests of the Cargill Elevator Company at Kindred, N. D.

H. H. Beach is again buying grain for the Lamberon Elevator Company at Predmore, Minn.

John Close has opened an agency of the Northwestern Elevator Company at Silver Leaf, N. D.

S. G. Mogan has taken charge of the Winona Mill Company's warehouse at Lake Preston, S. D.

Thomas McKennet has taken charge of the newly opened Merchants' Elevator at Webster, S. D.

J. D. Harker, formerly of Tappen, N. D., has taken charge of the Monarch Elevator at Jamestown.

George Zinn will look after the interests of the St. Anthony and Dakota Elevator Company at Bathgate, N. D.

A. C. Smith has taken charge of the Chicago O'Neill Grain Company's Elevator at Fort Dodge, Iowa.

L. S. Meeker, agent of the Richland Manufacturing Company of Lockport, N. Y., was a passenger on the train which pulled through the recent terrible forest

fire at Hinckley, Minn. He took to a swamp and escaped with but little injury.

H. L. Lewis has taken charge of the St. Anthony and Dakota and the Red River Valley Elevators at Milton, N. D.

A. B. Robbins, grain dealer of Minneapolis, has been nominated on the Republican ticket to run for the legislature.

Frank Covert has accepted the charge of the Tacoma Grain Company's Northern Pacific Elevator at Palouse, Wash.

William McQuillan of the grain firm of Maguire & Co. of Cincinnati has been gone on a wedding tour for a couple of weeks.

J. T. Drysdale, formerly of Dover, Minn., has taken the position of grain buyer for the H. J. O'Neill Grain Company at Bethany.

B. A. Hobson, who had been connected with the Kansas Grain Company at Atchison, Kan., for five years, has taken charge of the E. K. Nevling Grain Company's elevator at Newton, Kan.

RICE IMPORTS AND EXPORTS.

According to the last report of the Bureau of Statistics rice aggregating 423,000 pounds, valued at \$16,004, was imported free of duty under reciprocity treaty with the Hawaiian Islands during July, against 441,000 pounds, valued at \$16,272, imported in July, 1893; and during the seven months ending with July 5,392,900 pounds, valued at \$206,180, were imported, against 2,825,300 pounds, valued at \$103,327, imported during the seven months ending with July, 1893.

Of rice imported free of duty none was exported in July, against 360 pounds exported in July, 1893; and during the seven months ending with July 210 pounds were exported, against 5,891 pounds exported during the seven months ending with July, 1893.

Dutiable rice aggregating 7,097,855 pounds, valued at \$105,207, was imported during July, against 1,461,358 pounds, valued at \$22,343, imported during July preceding; and during the seven months ending with July 67,859,775 pounds, valued at \$1,008,437, were imported, against 41,625,915 pounds, valued at \$692,826, imported during the corresponding months of the year preceding. Of dutiable rice we exported 821,476 pounds, valued at \$12,221, during July, against 912,265 pounds, valued at \$16,971, in July preceding; and during the seven months ending with July 6,955,130 pounds, valued at \$116,917, were exported, against 6,577,625 pounds, valued at \$124,163, exported during the corresponding months of the year preceding.

Rice flour, rice meal and broken rice amounting to 8,128,612 pounds, valued at \$116,280, was imported during July, against 7,022,561 pounds, valued at \$111,190, imported in July, 1893; and during the seven months ending with July 35,089,527 pounds, valued at \$510,939, were imported, against 38,337,187 pounds, valued at \$647,717, imported during the seven months ending with July, 1893.

LOCATIONS FOR FACTORIES.

The name of the Chicago, Milwaukee & St. Paul Railway has long been identified with practical measures for the general upbuilding of its territory and the promotion of its commerce, hence manufacturers have an assurance that they will find themselves at home on the company's lines.

The Chicago, Milwaukee & St. Paul Railway Company owns and operates 6,150 miles (9,900 kilometers) of railway, exclusive of second track, connecting track or sidings. The eight states traversed by the lines of the company, Illinois, Wisconsin, Northern Michigan, Iowa, Missouri, Minnesota, South Dakota and North Dakota, possess, in addition to the advantages of raw material and proximity to markets, that which is the prime factor in the industrial success of a territory—a people who form one live and thriving community of business men, in whose midst it is safe and profitable to settle. Many towns on the line are prepared to treat very favorably with manufacturers who would locate in their vicinity.

Mines of coal, iron, copper, lead and zinc, forests of soft and hard wood, quarries, clays of all kinds, tanbark, flax and other raw materials exist in its territory in addition to the vast agricultural resources.

A number of new factories have been induced to locate—largely through the instrumentality of this company—at towns on its lines. The central position of the states traversed by the Chicago, Milwaukee & St. Paul Railway makes it possible to command all the markets of the United States. The trend of manufacturing is westward. Nothing should be permitted to delay enterprising manufacturers from investigating. Confidential inquiries are treated as such. The information furnished a particular industry is reliable. Address

LUIS JACKSON,
Industrial Commissioner, C. & St. P. R'y,
425 Old Colony Building, Chicago, Ill.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

GAS AND GASOLINE ENGINES.

We can make specially low prices on gas and gasoline engines of from 1 to 5-horse power. Address COLBORNE MFG. Co., 31-41 East Indiana street, Chicago.

POSITION WANTED.

Situation wanted by a thoroughly competent grain elevator man. Has had several years' experience in the elevator business. Am not afraid of work. Fully competent of taking charge where a reliable man is wanted. Best references as to honesty, sobriety and ability. If preferred would take an interest instead of salary. Address

T. B., care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago.

GRAIN TESTERS FOR \$7.

We will continue to sell 2-quart grain testers at \$7 cash with order. Every one guaranteed to be the Standard Winchester bushel. Over 100 were sold in December and January. We guarantee satisfaction and will refund money on return of tester if not satisfactory. We are also dealers in all kinds of milling and elevator specialties and second-hand machinery. Address

A. S. GARMAN & SONS, Akron, Ohio.

DAVIS GRAIN TABLES.

The value of wheat or any grain at 60 pounds to the bushel, for any amount less than 100 bushels is shown without addition or multiplication, and for any amount over 100 and under 1,000 bushels, with but a single addition; at any price from 25 cents to \$1.25 per bushel. The value of bushels and pounds of other grain also is shown at 56, 48 and 32 pounds to the bushel at any price from 15 cents to \$1.50 per bushel. Price, postpaid, \$1.25. Address

E. D. DAVIS, 520 Nicollet Ave., Minneapolis, Minn.



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GASOLINE ENGINE CHEAP.

One 7-horse power Charter Gasolines Engine and all the fixtures. Address

F. S. WELLER, Quincy, Ill.

ENGINE AND BOILER FOR SALE.

A 10x20 engine and 24'x40" two-flue boiler for sale. In good order and running a 60-barrel flour mill. Cheap for cash. Address

D. S. GREELY, Lebanon, Ohio.

ELEVATOR FOR SALE CHEAP.

A horse power dump elevator for sale cheap. Situated in one of the best grain growing sections of the state of Iowa. This is a bargain. Address

W., care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago, Ill.

GRAIN ELEVATOR FOR SALE.

Steam power grain elevator on Chicago & Alton Railroad in Missouri for sale. Convenient to Chicago, St. Louis and Kansas City. Corn sheller, scales, offices, etc., complete. Good opening for lumber business in connection. Splendid grain country. Healthy location. Now in operation and rented to good advantage. Would accept other good property in part payment. Address

J. G. M., Box 656, Washington, D. C.

PATTERNS FOR GAS ENGINES FOR SALE.

For Sale—The complete patterns for 4 sizes of gas and gasoline engines all ready for the market. Over 25 already three years in use. Good testimonials. See them running. If you mean business address

GAS AND GASOLINE ENGINES, care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago, Ill.

CLEANING ELEVATOR AT A BARGAIN.

An elevator on the line of the Chicago, Milwaukee & St. Paul Railroad, in the best grain section of Southern Wisconsin, with a paying and increasing business of cleaning grain in transit, is for sale. Cleaning and shipping capacity 1,000 bushels per hour; storage capacity, 25,000 bushels. Ironclad building; 45-horse power engine and boiler, feed rolls, etc. All in perfect condition and now in operation. A bargain for the right party. Address

WISCONSIN, care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago, Ill.

NO BETTER PROOF

Of the worth of the Demuth Check Scale Beams need be given than the fact that large elevator companies like the C. H. & D. and the Wabash of the Toledo, the Union Depot Elevator Company of Detroit, and the Armour of Chicago, have had the scale beams in their older elevators changed to check beams after having used the check beams in new elevators. If they had not proved to be valuable these companies and many others would hardly have incurred the expense of tearing their old beams out to have them replaced by check beams. Furnished only with Fairbank's Scales.

JENNINGS' CIPHER CODE.

Jennings' N. E. Telegraph Cipher contains many novel ideas, and is complete with instructions as to buying, selling, ordering, market advices, offers, bids, finance, bill lading, instructions, freight inquiries and advices, shipping inquiries and instructions, guaranteeing, etc., such as no other cipher contains. It will save you 25 to 50 per cent. more than any other code on your New England business; also giving names and addresses of 1,400 New England carload buyers. Send for circular issued March 1 giving names of firms up to date using the cipher and recommending it to the trade. Cost \$3, sent postpaid on receipt of price. Address

HENRY JENNINGS, 613 Chamber of Commerce, Boston, Mass.

ELEVATOR BUILDING AND MACHINERY.

A complete elevator with annex, total capacity about 300,000 bushels. The two houses are connected by three 24-inch rubber belt conveyors in the top and three screw conveyors, 14 inches in diameter, in the bottom. They contain one good steam engine 14x24 inches, of about 75-horse power, one 52-inch boiler, with 54 3-inch flues, one large main rubber belt and main line of shafting, six 14-inch rubber elevator belts with 12-inch buckets, three of the best Clarke Steam Shovels, three 16-inch oak tan leather cross belts, five large hopper scales. All of the above belts and machinery are in the best of order and are for sale, together with the buildings to be removed in a reasonable time. Address

W. T. CORNELISON, Agent, Peoria, Ill.

FOR SALE.

THREE GRAIN ELEVATORS

In Western Iowa on C. & N. W. R. R.

MARTIN D. STEVERS & CO.

COMMISSION MERCHANTS,
218 La Salle St., - CHICAGO.

BAGS! BAGS!!

For Grain or Anything.

Burlaps and Cotton Bags, Twine, etc.

Manufactory and Office:
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ORDER YOUR COAL FROM



CHICAGO OFFICE, 355 Dearborn Street.

Cheap Excursion

CHICAGO
To CINCINNATI,
Via Pennsylvania Lines,

FRIDAY, SEPTEMBER 21,
\$6.00 Round Trip.

Leave Union Station 8:20 P. M. Tickets will be good to return until Sunday, September 23, inclusive. Tickets will be on sale at Pennsylvania Ticket Office.

248 Clark St., Cor. Jackson,
and at Union Station.

COMMISSION CARDS.

W. F. JOHNSON.

F. J. SCHUYLER.

W. F. JOHNSON & CO.,

Grain, Seed and Provision

COMMISSION MERCHANTS

Room 59 Board of Trade, CHICAGO.

Rooms 406-408 Corn Exchange, MINNEAPOLIS.

Room 317 Chamber of Commerce, ST. LOUIS.

Room 23 Chamber of Commerce, MILWAUKEE.

Address all Correspondence to and make all Drafts on Chicago.

Robert McKnight & Sons,

COMMISSION MERCHANTS,

AND DEALERS IN

GRAIN, FEED AND HAY,

2106 and 2108 Market Street, - PHILADELPHIA

REFERENCES: { Merchants' and Third National Banks,
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COLLINS & Co.,

STRICTLY COMMISSION

Grain, Hay and Mill Feed.

CINCINNATI, OHIO.

Grain for Seed, Feed and Milling.

E. R. ULRICH.

E. R. ULRICH, JR.

E. R. ULRICH & SON,

Western Grain Merchants

And Shippers of Choice Milling White or Yellow Corn,

Also Mixed Corn, White Oats, Mixed Oats and Choice Red Winter Milling Wheat. Elevators and Storage along the Line of Wabash Ry., J. S. E. Ry., C. & A. Ry., and St. L. C. & C. P. Ry. in Central Illinois.

Office, Sixth Floor, Illinois National Bank.

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ILLINOIS.

We use Robinson's or Jennings' Cipher.

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ESTABLISHED 1865.

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Liberal Advances made on Consignments.

GRAIN AND SEEDS of all kinds SPECIALTIES.
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373-375 Carroll Avenue, Chicago.REFERENCES: { Union National Bank, Chicago, and
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We are members of the Board of Trade and have salesmen at the principal railroad yards.

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Let us know what you have to offer.**D. G. Stewart,****GRAIN AND COMMISSION.**

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Capacity, 300,000 Bushels.

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Careful attention given to orders from Brewers, Maltsters and Millers

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No. 17 Chamber of Commerce, Milwaukee.

Branch Offices:

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We deal very largely in Oats and Barley, shipping by cargoes, and also handle considerable quantities of Wheat.

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We have special facilities for drying damp grain, and are always ready to buy low-grade Wheat, Barley or Oats, as well as Barley

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Screenings and Wheat Screenings.

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We are always ready to make cash bids, free of commission,

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on samples, and will pay sight draft against

FIRE BURNT GRAIN

railroad receipt for 3/4 value, making final

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returns next day after shipment arrives.

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We buy west and north of Chicago, and sell east and south of Chicago.

Send us samples, quoting prices on anything you have to offer; or we will submit bids, if requested.

Milwaukee weights and inspection to govern all transactions when shipments touch this point.

We can handle goods over Northwestern Line, and most other roads, as readily as over the C., M. & St. P.

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 Refer to Union and Planters' Bank. Cash advances on B. of L.

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 (Capacity 100,000 Bushels).

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 16 Pacific Avenue, Chicago
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ALL KINDS OF MILL FEEDS.
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 PROMPT—CAREFUL—SATISFACTORY.

The Incline Elevator and Dump.

Patented April 3, 1894.

It is **THE NEW WAY** of elevating ear corn, shelled grain or minerals into car or storage bin.

Its cost is so small that it is practical for farm use.

Its pulley blocks are roller bushed and steel, reducing friction to a minimum.

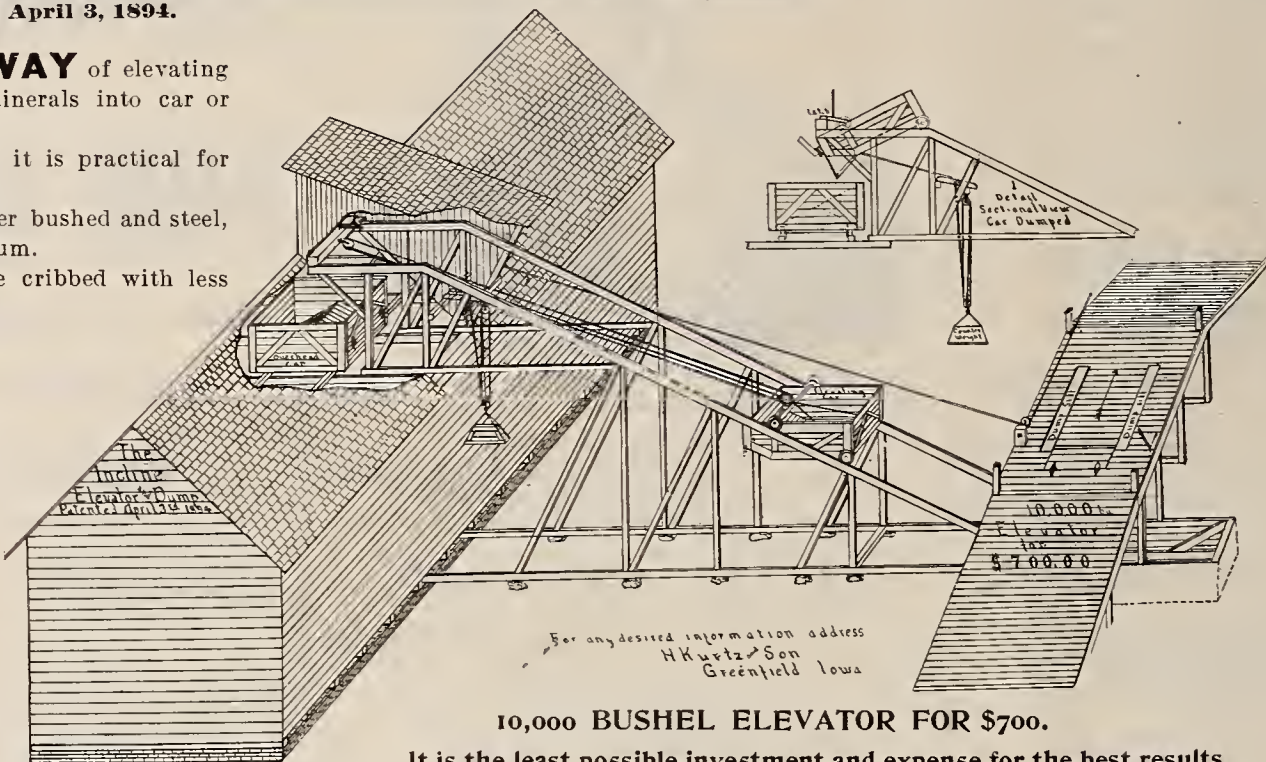
With it ear corn can be cribbed with less expense than with a scoop if cost of storage is considered.

With it a grain dealer's elevator has the following advantages:

Every team elevates its own load, thereby the power for elevating is obtained without cost.

A whole load is dumped at a time, making it practical to use an overhead car by which at the same cost you obtain more shipping bin capacity alone than all the storage and shipping bin capacity of a belt elevator.

Cleaning machinery can be adjusted with unusual convenience.



A NEW plan of chute, leading from shipping bin to railroad car, is used, through which either ear corn or shelled grain will pass equally well. The overhead car having a capacity of 100 bushels can be completely filled without moving.

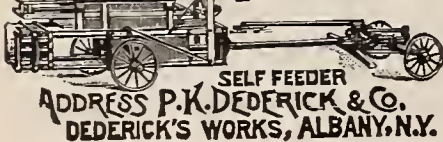
A safety ratchet holds the car at the top, and the teamster can unfasten rope without getting out of his wagon.

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The Central Elevator of Pittsburg, Pa., is for sale or lease on favorable terms. The storage capacity is 250,000 bushels, equipped with Corn Sheller, Grain Cleaner, Steam Shovels, and three (3) Portable Chopping Mills. This Elevator is situated in the midst of a compact population of 500,000 persons, and is connected East and West with all the tracks of the Pennsylvania system. The demand for chopped feed is very great in this locality. For a good live man with some capital there is a splendid opportunity. Good reasons given for selling. For further information address,

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Everyone who Buys or Sells Grain should subscribe for the

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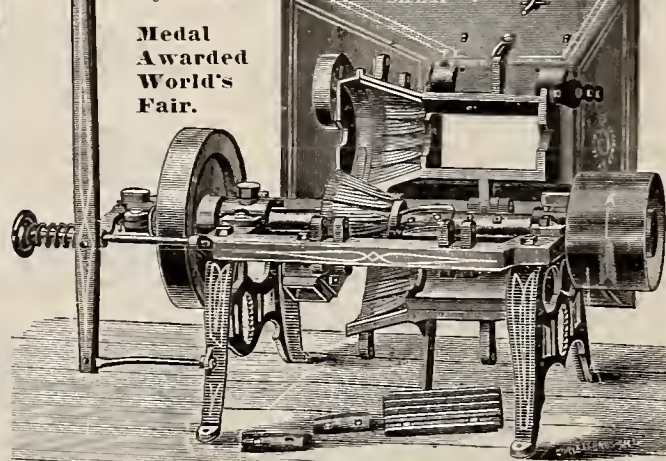
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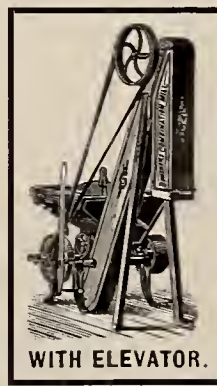
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The conical burrs give large capacity with moderate power. Ahead of rolls or burrs in speed and quality of work for grinding all kinds of grain into first-class feed. Will crush corn and cob, and grind oats, rye, barley, wheat, shelled corn, cotton seed, oil cake, etc. Has self-feeder for ear corn. The divided hopper makes it practical to grind oats, wheat, or other small grain, and crush ear corn at the same time; mixing the two in any proportion desired. Are sold with or without elevator attachment; and are made in three sizes, ranging from 2 to 12 horse power. GET my circular.



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Hotel St. Joseph, formerly "Plank's Tavern," is now open. Rates, \$2.00 a day.

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UNLIMITED POWER WITHOUT STEAM OR LABOR.

Wonderful Power for 1/4 to 1 cent per H. P. an hour. For particulars, state size needed, when wanted, and for what purpose.

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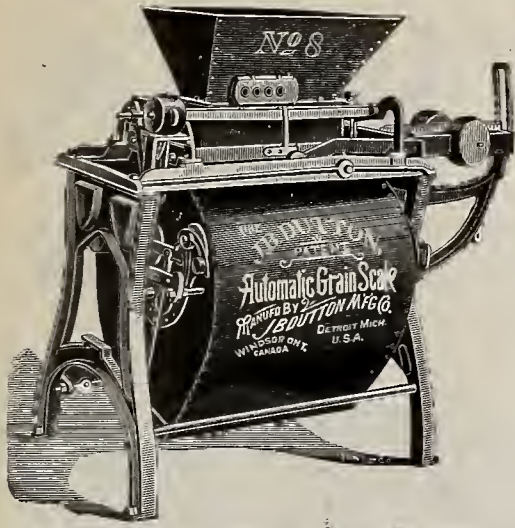
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ACCURATE AND RELIABLE AT ALL TIMES.

SCALES SENT ON 30 DAYS' TRIAL.

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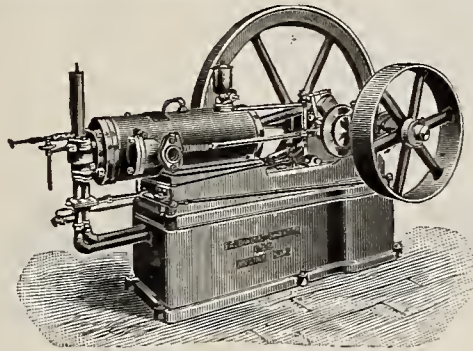
Manufactured exclusively by us at Chicago, with latest improvements.

AUTOMATIC POWER GRAIN
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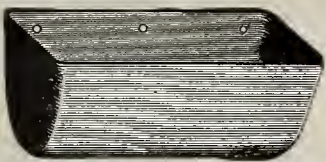
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SPROCKET WHEELS, LINK BELTING, ELE-
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EVERY SEAMLESS STEEL
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CALDWELL CHARTER GASOLINE AND GAS ENGINES.

2 TO 75 ACTUAL HORSE POWER.

These engines use gasoline from tanks lower than the engines. They are simple, reliable and safe. We build them substantially, of best material, and we know they are the best engines made.

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AMERICAN MILLER.

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EAGLE BRAND THE BEST!

It is superior to any other roofing and unequalled for House, Barn, Factory or outbuildings; it costs half the price of shingles, tin or iron; it is ready for use and easily applied by anyone; it is the best roofing in the market, in durability, to all others. Send for estimate and state size of roofing.

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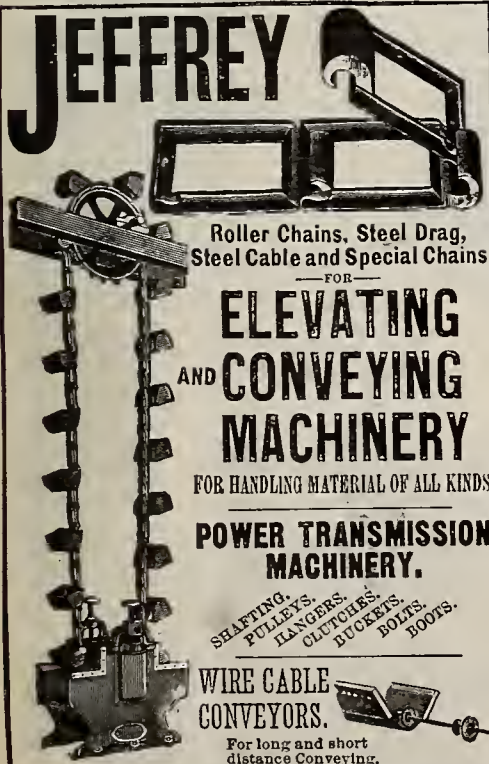
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NO TAR USED.

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FOR HANDLING MATERIAL OF ALL KINDS

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SHAFTING,
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For long and short
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Grain Elevator Machinery of Every Description,
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READY FOR USE.

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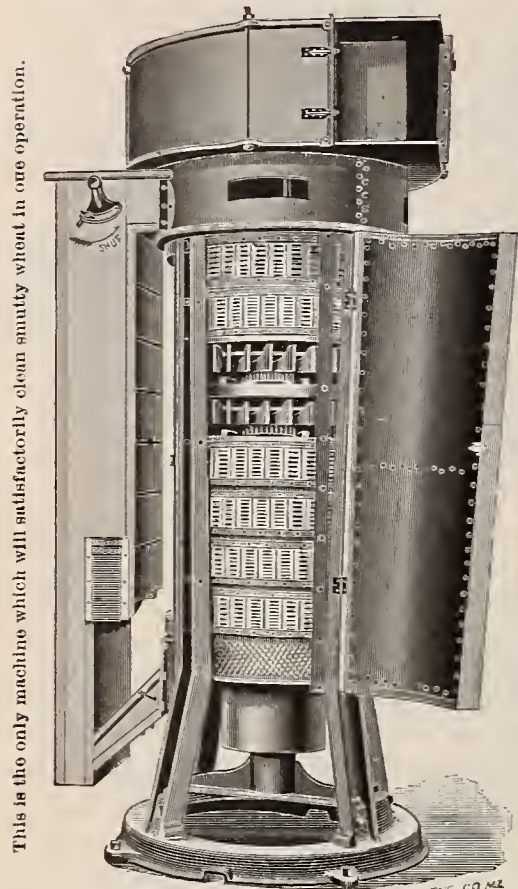
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The Iron Prince



This is the only machine which will satisfactorily clean shabby wheat in one operation.

The largest cleaning houses in Chicago, Kansas City and Tacoma will support this statement.

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The Prinz Improved Grader and Separator.

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This Separator contains all the latest improvements, among them are many entirely new and very valuable ones. It has a force feed, double suction, side shake, is made with or without attachment of cockle separation; entirely dustless, and is built for a capacity from 500 to 2,500 bushels.

THE SIEVES

Are constructed on an entirely new principle. Write for explanation of the same and you will be delighted by it.

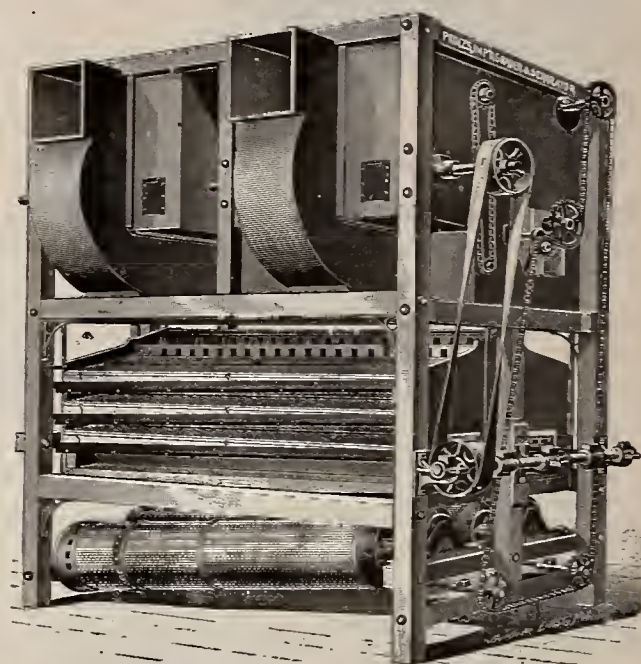
G. J. ZIMMERMAN, Grain Dealer,
No. 204 FLORIDA STREET.

MILWAUKEE, May 8, 1894.

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GENTLEMEN:—Have used your Grader and Separator for cleaning barley and wheat for the past two years, with the very best of satisfaction. They do all the work required of a machine of that kind and do it thoroughly. Respectfully yours,

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Cut Shows Machine with Cockle Attachment.

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Now in Successful Operation at Toledo, Ohio.

This is an entirely new and complete system for handling, treating and storing grain, seeds, millstuff, coal, sand, gravel, salt and other subdivided substances which can be handled in bulk, and the protection and preservation of cereals, seeds, vegetables, fruits, ensilage and fodder crops, cotton, wool and other fibers, tobacco, provisions and all perishable substances and valuable commodities in absolute safety from fire, water, air, storms, floods, microbes, insects, vermin, animals, thieves, evaporation, fermentation, oxidation or other causes of damage or destruction.

This system has nothing in common with other methods, but is entirely different and distinct, in construction, arrangement and operation, materials used, principles involved, and results obtained, from all others heretofore in use.

It is fully protected by 20 patents already issued, and others pending, in the United States and principal foreign countries.

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The title to all patents and other rights belonging to this system is vested in The Smith Pneumatic Transfer & Storage Co., and any infringement thereon will receive prompt attention.

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Full particulars furnished on application in person or by letter to

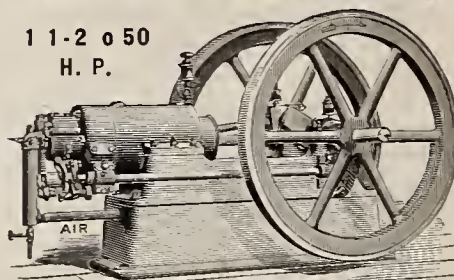
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THE SIMPLEST ENGINE IN AMERICA.

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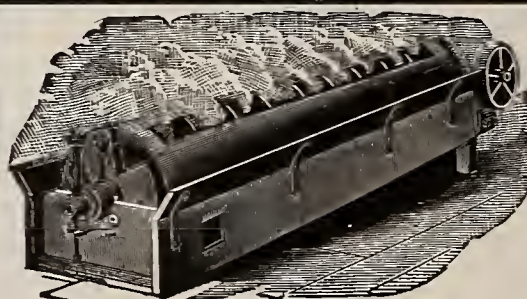
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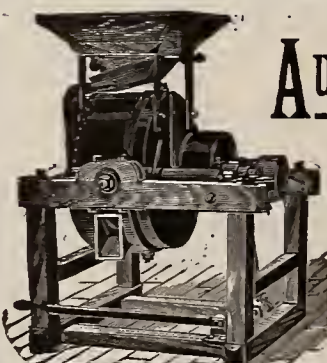


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For Cornmeal, Hominy, Buckwheat, Rice, and all kinds of Cereal Products; also Sand, Coal dust, etc.

Drying Cylinder made entirely of Iron. The machine has few parts and is not liable to get out of order. Automatic in its operation, requiring no attention. Double the capacity of any other Dryer sold for same price.

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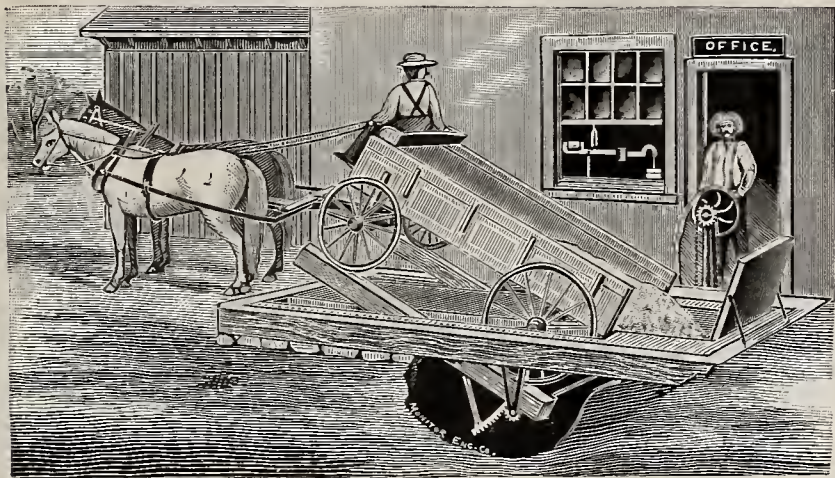
The adjustment is positive and automatic, utilizing every part of the grinding surfaces. Can be started or stopped at pleasure, without stopping the power. Is dressed without taking the shaft out of its boxes, or the belt off the pulley.

Comprises all Recent Improvements for Producing Goods at Lowest Cost.

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Savage & Love's



PATENT WAGON DUMP

The only dump made that is always under the complete control of operator.

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MESSRS. SAVAGE & LOVE, Rockford, Ill.

In regard to your Wagon Dump, we will say that we have about twenty of them, which we have had in active service for the past four or five years, and in this time we have had very few breakages, and nothing of any serious nature, which we consider is very good. And taken all round we think them as good, if not the best dump made.

Yours truly,

CARGILL ELEVATOR CO.

MINNEAPOLIS, MINN., August 9, 1894.

MESSRS. SAVAGE & LOVE, Rockford, Ill.

GENTLEMEN:—In answer to yours of August 9, will say that our dumps that we got from you have given us perfect satisfaction. Our buyers all say that it is superior to any dump they have seen. What they claim superior to other dumps is that they can be let part way down or all the way at pleasure. This helps them where they have sacks and large loads of wheat.

Dictated by J. F. Cargill.

Yours truly,
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Manufactured only by

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A. P. DICKEY GIANT GRAIN CLEANERS.

Over-Blast Suction Separator.

THE
STANDARD
IN THEIR
LINE.

*"Grain
Cleaned
to a
Standstill."*

Manufactured in any desired size and pattern, with capacities to accommodate the largest Elevator and Flouring Mills, or small Warehouses for hand use. Single and Double, End and Side Shake, and Dustless Separators, both Under and Over-Blast.

The Quadruple Suction Dustless Separator. Four separate suction, independent of each other with sieves and screens, requiring less power, less floor space, lower in height, needing less bracing, has better and more perfect separations, and furnished with the only perfect force feed and mixer on the market. Guaranteed to clean Grain to any desired standard without waste once through this machine twice as well as any machine made.

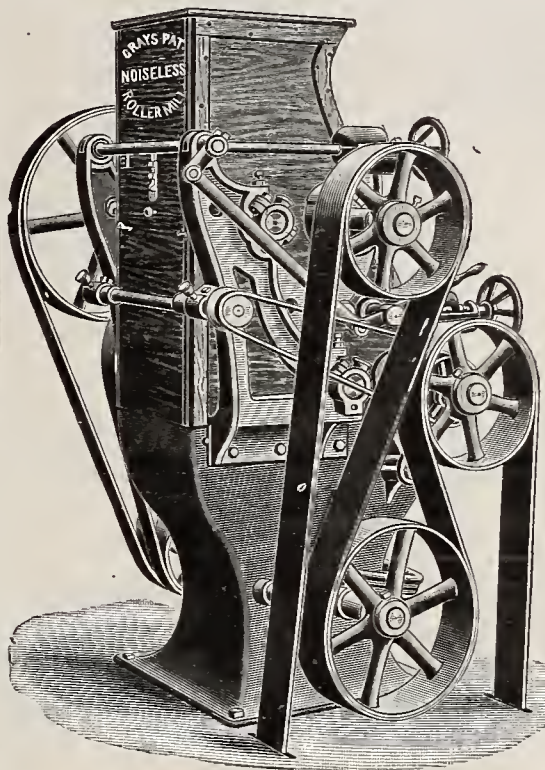
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CORN AND FEED ROLLS

FOUR SIZES: 6x12, 9x14, 9x18, 9x24—TWO BREAKS EACH.

DO YOU NEED ONE THIS FALL?



Fast Grinders.
Fine Grinders.
No Stone Dressing.
They Save Time,
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Attention.

Our Prices Will Surely Win Your Order

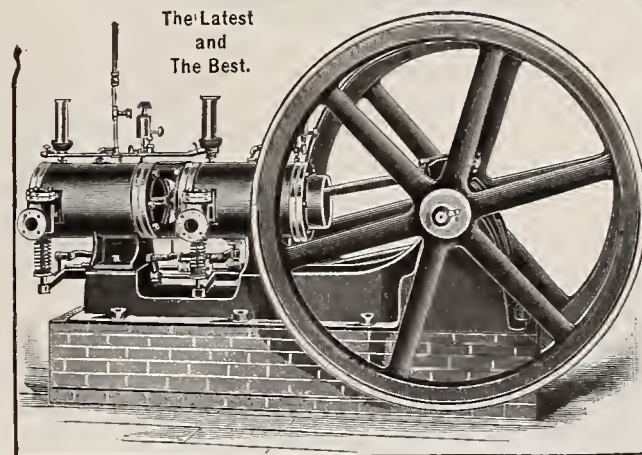
T. O. KILBOURN of Spring Valley, Minn., says: "I am grinding 25 bushels of mixed feed by the watch on a 9x18 Allis 2-break Roller Mill." Hundreds of other users speak as highly.

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SHAFTING, PULLEYS,
BELTING,
AND ALL KINDS OF
MILL AND ELEVATOR
SUPPLIES.

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The Latest
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The Gas and Gasoline Engine
of the Future.

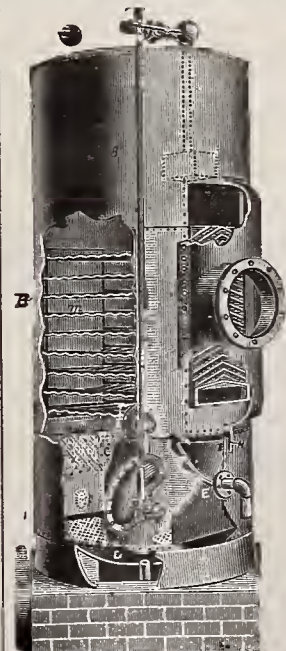
By its construction we get double the power from the same number of parts and weight as are used in the ordinary gas engine, thus enabling us to reduce the price to compete with steam engines, and as much better than the ordinary gas engine as the Corliss steam engine is better than the common slide valve of twenty years ago.

Two to 100 horse power, both vertical and horizontal.

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The Hicks Gas Engine Co.
Cleveland, Ohio.

STILWELL'S PATENT IMPROVED.



Lime Extracting
Heater.
Uses Exhaust
Steam.
Separates the Oil
from the
Steam and Water.
It Regulates
the Feed.
The Pipes Never
Pound.
Prevents Scale in
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all Impurities from
the Water
Before it Enters
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Over 4,500

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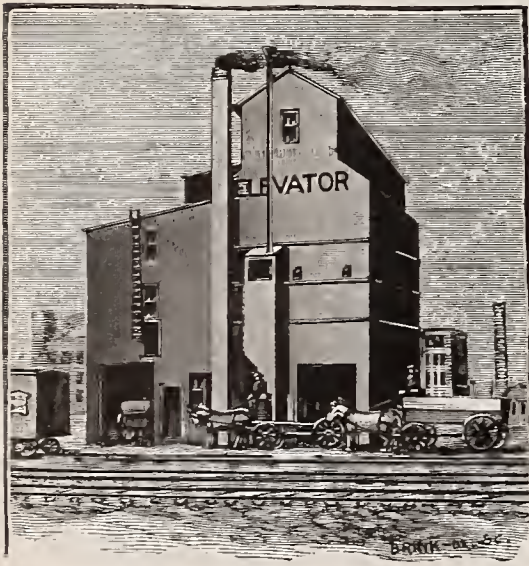
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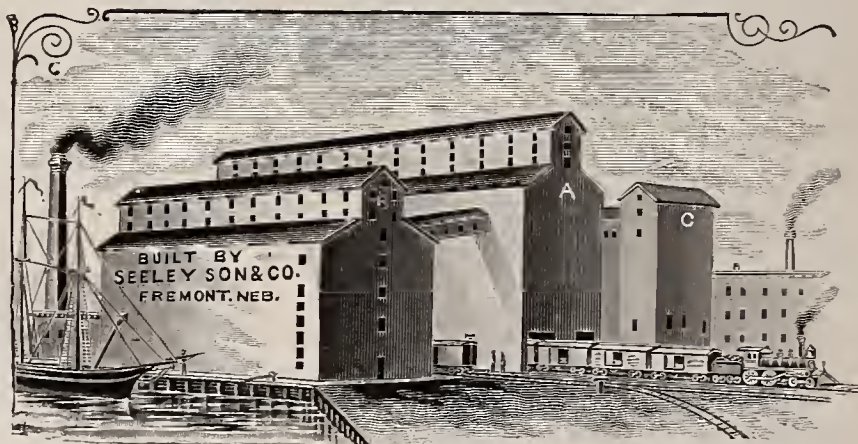
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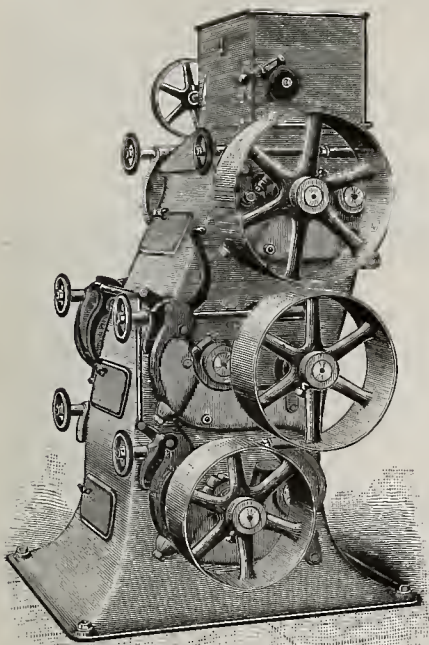
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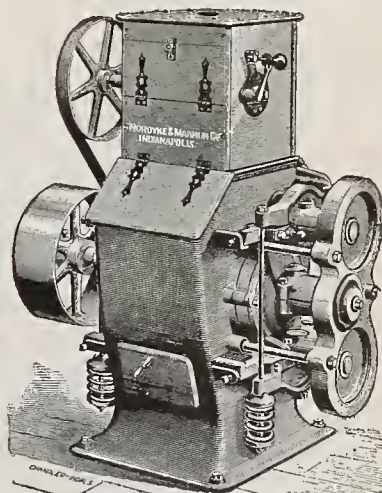


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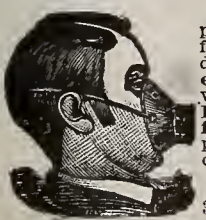
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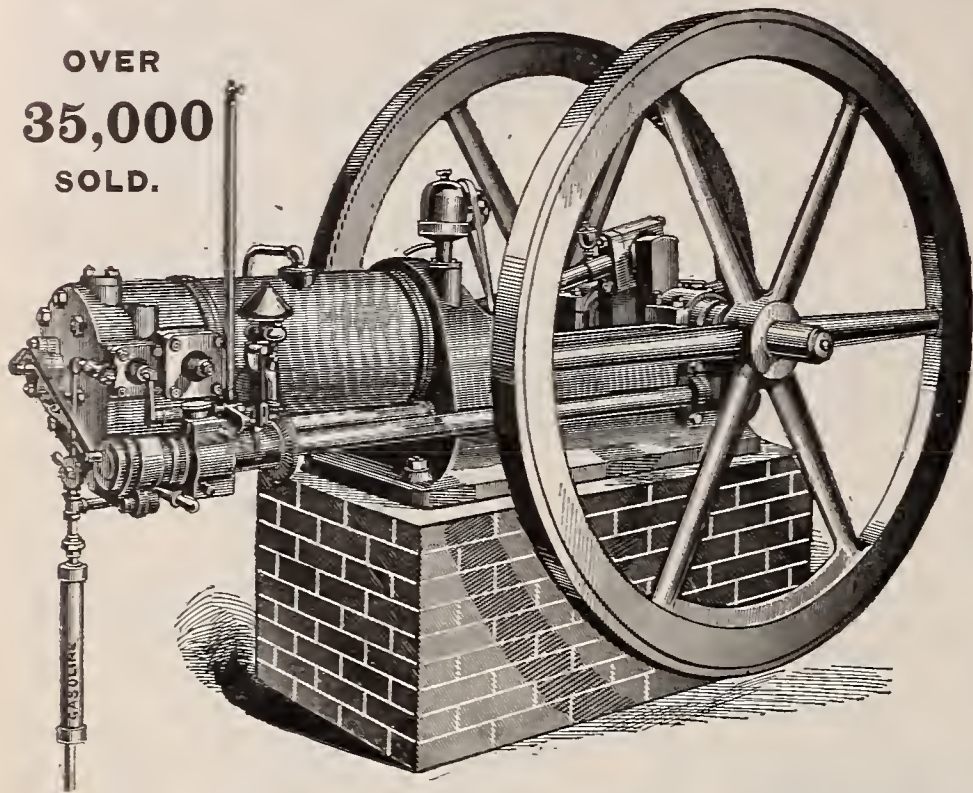
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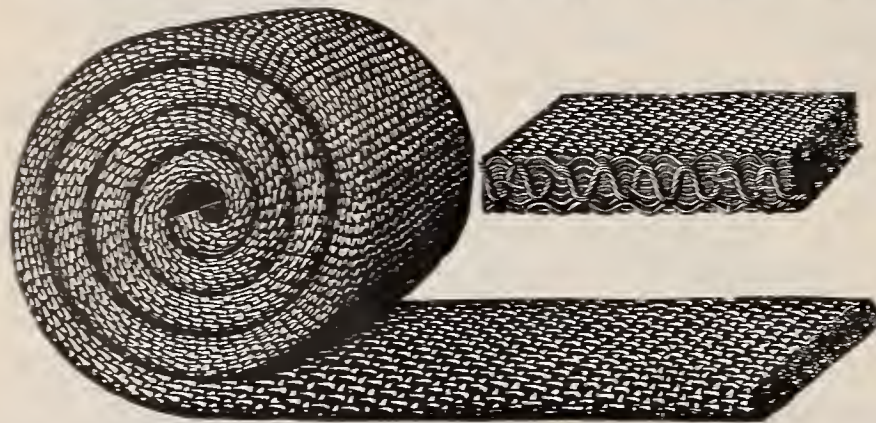
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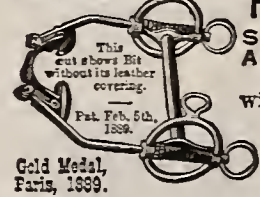
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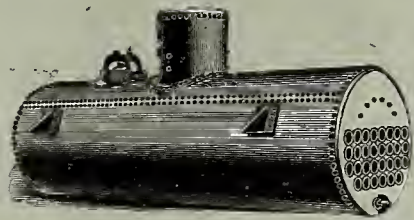
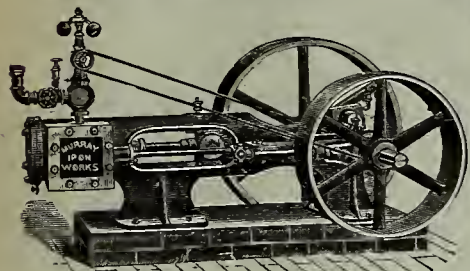
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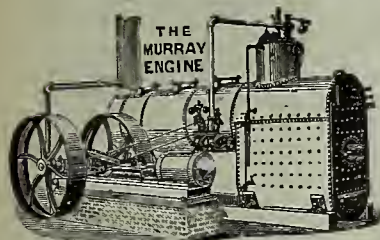
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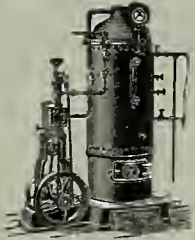


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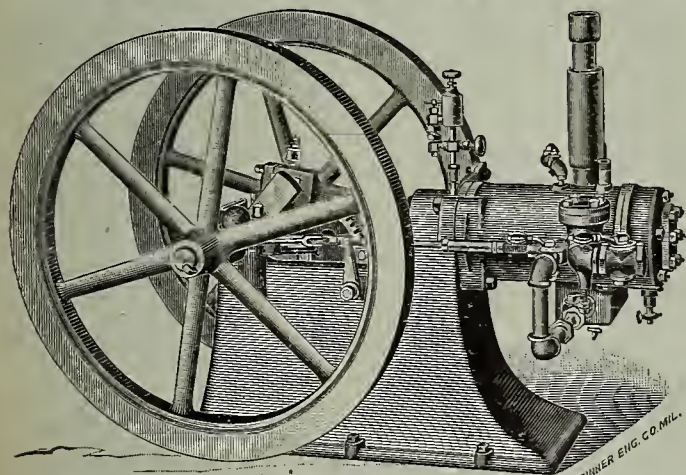
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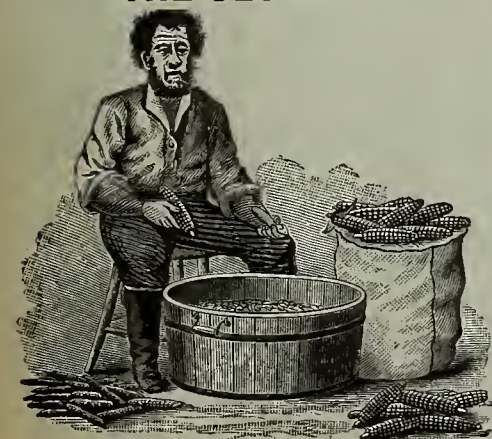
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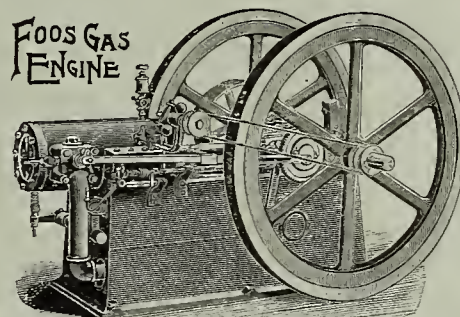
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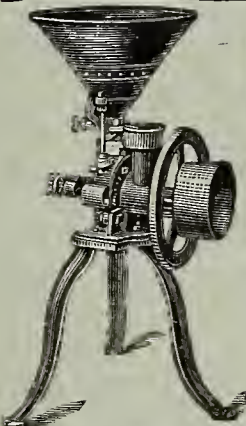


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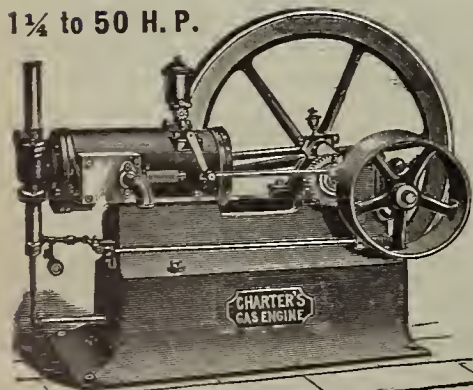
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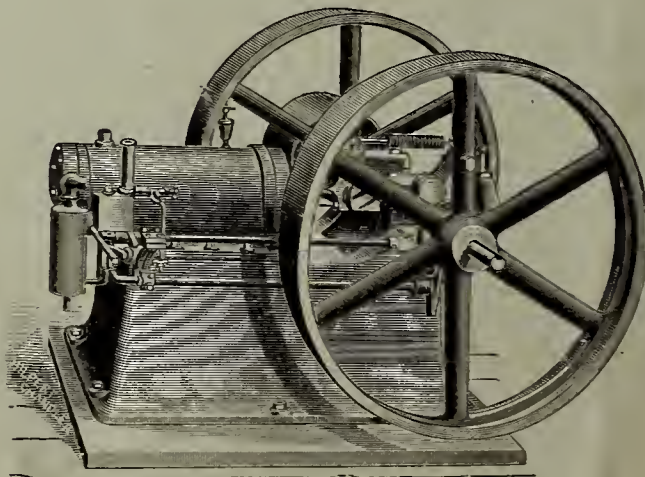
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